

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/721,479

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- | | |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 <input type="checkbox"/> Wrapped Nucleics | The number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping". |
| 2 <input type="checkbox"/> Wrapped Aminos | The amino acid number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping". |
| 3 <input type="checkbox"/> Incorrect Line Length | The rules require that a line not exceed 72 characters in length. This includes spaces. |
| 4 <input type="checkbox"/> Misaligned Amino Acid Numbering | The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers. |
| 5 <input type="checkbox"/> Non-ASCII | This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.
Please ensure your subsequent submission is saved in ASCII text so that it can be processed. |
| 6 <input type="checkbox"/> Variable Length | Sequence(s) <input type="checkbox"/> contain n's or Xaa's which represented more than one residue.
As per the rules, each n or Xaa can only represent a single residue.
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing. |
| 7 <input type="checkbox"/> PatentIn ver. 2.0 "bug" | A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) <input type="checkbox"/> . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences. |
| 8 <input type="checkbox"/> Skipped Sequences (OLD RULES) | Sequence(s) <input type="checkbox"/> missing. If intentional, please use the following format for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X:
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s). |
| 9 <input type="checkbox"/> Skipped Sequences (NEW RULES) | Sequence(s) <input type="checkbox"/> missing. If intentional, please use the following format for each skipped sequence.
<210> sequence id number
<400> sequence id number
000 |
| 10 <input type="checkbox"/> Use of n's or Xaa's (NEW RULES) | Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents. |
| 11 <input checked="" type="checkbox"/> Use of <213>Organism (NEW RULES) | Sequence(s) <input type="checkbox"/> are missing this mandatory field or its response.
4. |
| 12 <input checked="" type="checkbox"/> Use of <220>Feature (NEW RULES) | Sequence(s) <input type="checkbox"/> are missing the <220>Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules) |
| 13 <input type="checkbox"/> PatentIn ver. 2.0 "bug" | Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk. |

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/721,479

DATE: 12/07/2000
TIME: 07:23:33

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\1721479.raw

*Does Not Comply
Corrected Diskette Needed*

3 <110> APPLICANT: Coit, Doris
4 Medina-Selby, Angelica
5 Selby, Mark
6 Houghton, Michael
8 <120> TITLE OF INVENTION: NOVEL HCV NON-STRUCTURAL POLYPEPTIDE
10 <130> FILE REFERENCE: PP01617.002
OK 12 <140> CURRENT APPLICATION NUMBER: US/09/721,479
13 <141> CURRENT FILING DATE: 2000-11-22
15 <160> NUMBER OF SEQ ID NOS: 19
17 <170> SOFTWARE: PatentIn Ver. 2.0

ERRORED SEQUENCES

621 <210> SEQ ID NO: 2
 622 <211> LENGTH: 1771
 623 <212> TYPE: PRT
 624 <213> ORGANISM: Hepatitis C virus
 626 <220> FEATURE:
 627 <223> OTHER INFORMATION: Description of Artificial Sequence: Hepatitis C pns345
 629 <400> SEQUENCE: 2
 630 Met Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
 631 1 5 10 15
 633 Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 634 20 25 30
 636 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 637 35 40 45
 639 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
 640 50 55 60
 642 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Cys Asp Glu Cys His Ser
 643 65 70 75 80
 645 Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala
 646 85 90 95
 648 Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro
 649 100 105 110
 651 Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser
 652 115 120 125
 654 Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val
 655 130 135 140
 657 Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Cys
 658 145 150 155 160
 660 Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala
 661 165 170 175
 663 Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val
 664 180 185 190
 666 Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe
 667 195 200 205

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669 Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe
670 210 215 220
672 Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Leu Pro Gln Asp
673 225 230 235 240
675 Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro
676 245 250 255
678 Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
679 260 265 270
681 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
682 275 280 285
684 Glu Leu Thr Pro Ala Gln Thr Thr Val Arg Leu Arg Ala Tyr Met Asn
685 290 295 300
687 Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly
688 305 310 315 320
690 Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr
691 325 330 335
693 Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr
694 340 345 350
696 Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp
697 355 360 365
699 Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu
700 370 375 380
702 Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro
703 385 390 395 400
705 Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val
706 405 410 415
708 Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala
709 420 425 430
711 Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu
712 435 440 445
714 Ser Gln Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
715 450 455 460
717 Phe Asp Glu Met Gln Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
718 465 470 475 480
720 Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu
721 485 490 495
723 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr
724 500 505 510
726 Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
727 515 520 525
729 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
730 530 535 540
732 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
733 545 550 555 560
735 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
736 565 570 575
738 Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala
739 580 585 590
741 Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu

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742	595	600	605
744	Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val		
745	610	615	620
747	Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val		
748	625	630	635
750	Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val		640
751	645	650	655
753	Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala		
754	660	665	670
756	Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His		
757	675	680	685
759	Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val		
760	690	695	700
762	Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu		
763	705	710	715
765	His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp		720
766	725	730	735
768	Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys		
769	740	745	750
771	Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe		
772	755	760	765
774	Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile		
775	770	775	780
777	Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys		
778	785	790	795
780	Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp		800
781	805	810	815
783	Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Gly Pro Cys Thr Pro		
784	820	825	830
786	Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu		
787	835	840	845
789	Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly		
790	850	855	860
792	Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu		
793	865	870	875
795	Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro		880
796	885	890	895
798	Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg Val Gly Leu His		
799	900	905	910
801	Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val		
802	915	920	925
804	Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu		
805	930	935	940
807	Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser		
808	945	950	955
810	Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr		960
811	965	970	975
813	Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu		
814	980	985	990

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816	Tcp	Arg	Gln	Glu	Met	Gly	Gly	Asn	Ile	Thr	Arg	Val	Glu	Ser	Glu	Asn	
817			995			1000										1005	
819	Lys	Val	Vai	Ile	Leu	Asp	Ser	Phe	Asp	Pro	Leu	Val	Ala	Glu	Glu	Asp	
820			1010			1015										1020	
E-->	823	(<u>025</u>)	<u>1025</u>			1030			1035							1040	
825	Phe	Ala	Gln	Ala	Leu	Pro	Val	Itp	Ala	Arg	Pro	Asp	Tyr	Asn	Pro	Pro	
826						1045				1050						1055	
828	Leu	Val	Glu	Ihr	Trp	Lys	Pro	Asp	tyr	Glu	Pro	Pro	Pro	Val	Val	His	
829						1060			1065							1070	
E-->	831	Gly	Cys	Pro	Leu	Pro	Pro	Pro	Lys	Ser	Pro	Pro	Pro	Val	Pro	Pro	Arg
832						1075			1080							1085	
834	Lys	Lys	Arg	Thr	Val	Val	Leu	Thr	Glu	Ser	Thr	Leu	Ser	Thr	Ala	Leu	
835						1090			1095							1100	
E-->	837	Ala	Glu	Leu	Ala	Thr	Arg	Ser	Phe	Gly	Ser	Ser	Ser	Thr	Ser	Gly	Ile
E-->	838	(<u>105</u>)	<u>1105</u>			1110			1115								1120
840	Thr	Gly	Asp	Asn	Thr	Thr	Thr	Ser	Ser	Glu	Pro	Ala	Pro	Ser	Gly	Cys	
841						1125			1130							1135	
843	Pro	Pro	Asp	Ser	Asp	Ala	Glu	Ser	Tyr	Ser	Ser	Met	Pro	Pro	Leu	Glu	
844						1140			1145							1150	
846	Gly	Glu	Pro	Gly	Asp	Pro	Asp	Leu	Ser	Asp	Gly	Ser	Trp	Ser	Thr	Val	
847						1155			1160							1165	
849	Ser	Ser	Glu	Ala	Asn	Ala	Glu	Asp	Val	Val	Cys	Ser	Met	Ser	Tyr		
850						1170			1175							1180	
E-->	852	Ser	Trp	Thr	Gly	Ala	Leu	Val	Thr	Pro	Cys	Ala	Ala	Glu	Glu	Gln	Lys
E-->	853	(<u>185</u>)	<u>1185</u>			1190			1195								1200
855	Leu	Pro	Ile	Asn	Ala	Leu	Ser	Asn	Ser	Leu	Ieu	Arg	His	His	Asn	Leu	
856						1205				1210						1215	
858	Val	Tyr	Ser	Ihr	Thr	Ser	Arg	Ser	Ala	Cys	Glu	Arg	Gln	Lys	Lys	Val	
859						1220			1225							1230	
861	Thr	Phe	Asp	Arg	Leu	Gln	Val	Ieu	Asp	Ser	His	Tyr	Gln	Asp	Val	Ieu	
862						1235			1240							1245	
864	Lys	Glu	Val	Lys	Ala	Aia	Aia	Ser	Lys	Val	Lys	Ala	Asn	Ieu	Leu	Ser	
865						1250			1255							1260	
E-->	867	Val	Glu	Glu	Ala	Cys	Ser	Ieu	Thr	Pro	Pro	His	Ser	Ala	Lys	Ser	Lys
E-->	868	(<u>265</u>)	<u>1265</u>			1270			1275								1280
870	Phe	Gly	Tyr	Gly	Ala	Lys	Asp	Val	Arg	Cys	His	Ala	Arg	Lys	Ala	Val	
871						1285			1290							1295	
873	Thr	His	Ile	Asn	Ser	Val	Trp	Lys	Asp	Ieu	Ieu	Glu	Asp	Asn	Val	Thr	
874						1300			1305							1310	
876	Pro	Ile	Asp	Thr	Thr	Ile	Met	Ala	Iys	Asn	Glu	Val	Phe	Cys	Val	Gln	
877						1315			1320							1325	
879	Pro	Glu	Lys	Gly	Gly	Arg	Lys	Pro	Ala	Arg	Ieu	Ile	Val	Phe	Pro	Asp	
880						1330			1335							1340	
E-->	883	(<u>345</u>)	<u>1345</u>			1350			1355								1360
885	Lys	Leu	Pro	Leu	Ala	Val	Met	Gly	Ser	Ser	Tyr	Gly	Phe	Gln	Tyr	Ser	
886						1365			1370							1375	
888	Pro	Gly	Gln	Arg	Val	Glu	Phe	Ieu	Val	Gln	Ala	Trp	Lys	Ser	Iys	Lys	

When numbering,
first amino acid
on a line, begin
number directly
below first letter
of amino acid. Do
not extend number
onto next amino acid.

Leave one space
between last number
and beginning of
next amino acid.

e.g. Glu | Arg
1025 | Space | Arg

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889	1380	1385	1390
891	Thr Pro Met Cys Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val		
892	1395	1400	1405
894	Thr Glu Ser Asp Ile Arg Thr Glu Ala Ile Tyr Gln Cys Cys Asp		
895	1410	1415	1420
897	Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu		
E--> 898	425	1430	1435
			1440
900	Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr		
901	1445	1450	1455
903	Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr		
904	1460	1465	1470
906	Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu		
907	1475	1480	1485
909	Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys		
910	1490	1495	1500
912	Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr		
E--> 913	505	1510	1515
			1520
915	Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro		
916	1525	1530	1535
918	Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val		
919	1540	1545	1550
921	Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro		
922	1555	1560	1565
924	Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro		
925	1570	1575	1580
927	Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp		
E--> 928	585	1590	1595
			1600
930	Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg		
931	1605	1610	1615
933	Asp Gln Leu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr		
934	1620	1625	1630
936	Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly		
937	1635	1640	1645
939	Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg		
940	1650	1655	1660
942	Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp		
E--> 943	665	1670	1675
			1680
945	Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly		
946	1685	1690	1695
948	Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr		
949	1700	1705	1710
951	Lys Leu Lys Leu Thr Pro Ile Ala Ala Gly Gln Leu Asp Leu Ser		
952	1715	1720	1725
954	Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val		
955	1730	1735	1740
957	Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala		
E--> 958	745	1750	1755
			1760
960	Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg		
961	1765	1770	

*Name
Error*

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1566 <210> SEQ ID NO: 4
1567 <211> LENGTH: 1771
1568 <212> TYPE: PRT
1569 <213> ORGANISM: Artificial Sequence
W--> 1571 <220> FEATURE:
W--> 1571 <223> OTHER INFORMATION:

1571 <400> SEQUENCE: 4
1572 Met Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
1573 1 5 10 15
1575 Ser Val Ala Ala Thr Ile Gly Phe Gly Ala Tyr Met Ser Lys Ala His
1576 20 25 30
1578 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
1579 35 40 45
1581 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
1582 50 55 60
1584 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Cys Asp Glu Cys His Ser
1585 65 70 75 80
1587 Thr Asp Ala Thr Ser Ile Ile Gly Ile Gly Thr Val Leu Asp Gln Ala
1588 85 90 95
1590 Glu Thr Ala Gly Ala Arg Leu Val Val Ala Thr Ala Thr Pro Pro
1591 100 105 110
1593 Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser
1594 115 120 125
1596 Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val
1597 130 135 140
1599 Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Cys
1600 145 150 155 160
1602 Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala
1603 165 170 175
1605 Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val
1606 180 185 190
1608 Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe
1609 195 200 205
1611 Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe
1612 210 215 220
1614 Ser Leu Asp Pro Thr Phe Ile Glu Thr Ile Thr Leu Pro Gln Asp
1615 225 230 235 240
1617 Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro
1618 245 250 255
1620 Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
1621 260 265 270
1623 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
1624 275 280 285
1626 Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn
1627 290 295 300
1629 Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly
1630 305 310 315 320
1632 Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr
1633 325 330 335

See pp 8-10, for

→ These sequence identifiers are mandatory

wherever (213)

response is
Unknown or

Artificial Sequence

(see item 12 on

Exam Summary
sheet)

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1635 Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr
 1636 340 345 350
 1638 Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp
 1639 355 360 365
 1641 Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu
 1642 370 375 380
 1644 Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro
 1645 385 390 395 400
 1647 Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val
 1648 405 410 415
 1650 Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala
 1651 420 425 430
 1653 Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu
 1654 435 440 445
 1656 Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
 1657 450 455 460
 1659 Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
 1660 465 470 475 480
 1662 Gly Met Met Leu Ala Glu Gln Phe Lys Glu Lys Ala Leu Gly Leu Leu
 1663 485 490 495
 1665 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr
 1666 500 505 510
 1668 Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
 1669 515 520 525
 1671 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
 1672 530 535 540
 1674 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
 1675 545 550 555 560
 1677 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
 1678 565 570 575
 1680 Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala
 1681 580 585 590
 1683 Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu
 1684 595 600 605
 1686 Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val
 1687 610 615 620
 1689 Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val
 1690 625 630 635 640
 1692 Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val
 1693 645 650 655
 1695 Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala
 1696 660 665 670
 1698 Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His
 1699 675 680 685
 1701 Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Arg Val
 1702 690 695 700
 1704 Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu
 1705 705 710 715 720
 1707 His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp

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1708	725	730	735
1710	Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys		
1711	740	745	750
1713	Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe		
1714	755	760	765
1716	Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile		
1717	770	775	780
1719	Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys		
1720	785	790	795
1722	Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp		
1723	805	810	815
1725	Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro		
1726	820	825	830
1728	Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu		
1729	835	840	845
1731	Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr GLY		
1732	850	855	860
1734	Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu		
1735	865	870	875
1737	Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro		
1738	885	890	895
1740	Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg Val Gly Leu His		
1741	900	905	910
1743	Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val		
1744	915	920	925
1746	Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu		
1747	930	935	940
1749	Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser		
1750	945	950	955
1752	Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr		
1753	965	970	975
1755	Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu		
1756	980	985	990
1758	Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn		
1759	995	1000	1005
1761	Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp		
1762	1010	1015	1020
1764	Glu Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg		
E--> 1765	025	1030	1035
			1040
1767	Phe Ala Glu Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro		
1768	1045	1050	1055
1770	Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His		
1771	1060	1065	1070
1773	Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg		
1774	1075	1080	1085
1776	Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu		
1777	1090	1095	1100
1779	Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile		
E--> 1780	105	1110	1115
			1120

fix numbering

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/721,479

DATE: 12/07/2000
TIME: 07:23:33

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

1782 Thr Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys
 1783 1125 1130 1135
 1785 Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu
 1786 1140 1145 1150
 1788 Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val
 1789 1155 1160 1165
 1791 Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr
 1792 1170 1175 1180
 1794 Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Glu Gln Lys
 E--> 1794 185 1190 1195 1200
 1797 Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu
 1798 1205 1210 1215
 1800 Val Tyr Ser Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val
 1801 1220 1225 1230
 1803 Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu
 1804 1235 1240 1245
 1806 Lys Glu Val Lys Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser
 1807 1250 1255 1260
 1809 Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys
 E--> 1810 265 1270 1275 1280
 1812 Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
 1813 1285 1290 1295
 1815 Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr
 1816 1300 1305 1310
 1818 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln
 1819 1315 1320 1325
 1821 Pro Gln Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
 1822 1330 1335 1340
 1824 Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
 E--> 1825 345 1350 1355 1360
 1827 Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser
 1828 1365 1370 1375
 1830 Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys
 1831 1380 1385 1390
 1833 Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
 1834 1395 1400 1405
 1836 Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp
 1837 1410 1415 1420
 1838 Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu
 E--> 1840 425 1430 1435 1440
 1842 Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr
 1843 1445 1450 1455
 1845 Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr
 1846 1460 1465 1470
 1848 Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu
 1849 1475 1480 1485
 1851 Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys
 1852 1490 1495 1500
 1854 Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:33

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

E--> 1856 505 1510 1515 1520
 1857 Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro
 1858 1525 1530 1535
 1860 Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val
 1861 1540 1545 1550
 1863 Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
 1864 1555 1560 1565
 1866 Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
 1867 1570 1575 1580
 1869 Val Asn Ser Trp Leu Gly Asn Ile Met Phe Ala Pro Thr Leu Trp
 E--> 1870 585 1590 1595 1600
 1872 Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg
 1873 1605 1610 1615
 1875 Asp Gln Leu Glu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr
 1876 1620 1625 1630
 1878 Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly
 1879 1635 1640 1645
 1881 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg
 1882 1650 1655 1660
 1884 Val Ala Ala Cys Leu Arg Lys Ile Gly Val Pro Pro Leu Arg Ala Trp
 E--> 1885 665 1670 1675 1680
 1887 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly
 1888 1685 1690 1695
 1890 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr
 1891 1700 1705 1710
 1893 Lys Leu Lys Ile Thr Pro Ile Ala Ala Gly Gln Leu Asp Leu Ser
 1894 1715 1720 1725
 1896 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
 1897 1730 1735 1740
 1899 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala
 E--> 1900 745 1750 1755 1760
 1902 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg
 1903 1765 1770
 3475 <210> SEQ ID NO: 9
 3476 <211> LENGTH: 1771
 3477 <212> TYPE: PRT
 3478 <213> ORGANISM: Artificial Sequence
 3480 <220> FEATURE:
 3481 <223> OTHER INFORMATION: Description of Artificial Sequence: pd.deltaNS3NS5
 3483 <400> SEQUENCE: 9
 3484 Met Ala Ala Tyr Ala Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
 3485 1 5 10 15
 3487 Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 3488 20 25 30
 3490 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 3491 35 40 45
 3493 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
 3494 50 55 60
 3496 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser

MP1315

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

3497	65	70	75	80
3499	Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala			
3500	85	90	95	
3502	Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro			
3503	100	105	110	
3505	Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser			
3506	115	120	125	
3508	Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val			
3509	130	135	140	
3511	Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys			
3512	145	150	155	160
3514	Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala			
3515	165	170	175	
3517	Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val			
3518	180	185	190	
3520	Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe			
3521	195	200	205	
3523	Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe			
3524	210	215	220	
3526	Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Leu Pro Gln Asp			
3527	225	230	235	240
3529	Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro			
3530	245	250	255	
3532	Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe			
3533	260	265	270	
3535	Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr			
3536	275	280	285	
3538	Glu Leu Thr Pro Ala Glu Thr Val Arg Leu Arg Ala Tyr Met Asn			
3539	290	295	300	
3541	Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly			
3542	305	310	315	320
3544	Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr			
3545	325	330	335	
3547	Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr			
3548	340	345	350	
3550	Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp			
3551	355	360	365	
3553	Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu			
3554	370	375	380	
3556	Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro			
3557	385	390	395	400
3559	Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val			
3560	405	410	415	
3562	Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala			
3563	420	425	430	
3565	Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu			
3566	435	440	445	
3568	Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu			
3569	450	455	460	

RAW SEQUENCE LISTING DATE: 12/07/2000
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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

3571 Phe Asp Glu Met Glu Gln Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
 3572 465 470 475 480
 3574 Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu
 3575 485 490 495
 3577 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr
 3578 500 505 510
 3580 Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
 3581 515 520 525
 3583 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
 3584 530 535 540
 3586 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
 3587 545 550 555 560
 3589 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
 3590 565 570 575
 3592 Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala
 3593 580 585 590
 3595 Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu
 3596 595 600 605
 3598 Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val
 3599 610 615 620
 3601 Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val
 3602 625 630 635 640
 3604 Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val
 3605 645 650 655
 3607 Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala
 3608 660 665 670
 3610 Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His
 3611 675 680 685
 3613 Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val
 3614 690 695 700
 3616 Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu
 3617 705 710 715 720
 3619 His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp
 3620 725 730 735
 3622 Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys
 3623 740 745 750
 3625 Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe
 3626 755 760 765
 3628 Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile
 3629 770 775 780
 3631 Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys
 3632 785 790 795 800
 3634 Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp
 3635 805 810 815
 3637 Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro
 3638 820 825 830
 3640 Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu
 3641 835 840 845
 3643 Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\f721479.raw

3644	850	855	860
3646	Met Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu		
3647	865	870	875
3649	Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro		880
3650	885	890	895
3652	Cys Lys Pro Leu Ieu Arg Glu Glu Val Ser Phe Arg Val Gly Leu His		
3653	900	905	910
3655	Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val		
3656	915	920	925
3658	Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu		
3659	930	935	940
3661	Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser		
3662	945	950	955
3664	Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr		960
3665	965	970	975
3667	Ala Asn His Asp Ser Pro Asp Ala Glu Ieu Ile Glu Ala Asn Leu Leu		
3668	980	985	990
3670	Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn		
3671	995	1000	1005
3673	Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp		
3674	1010	1015	1020
3676	Glu Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg		
E--> 3677	1025	1030	1035
3679	Phe Ala Gln Ala Ieu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro		1040
3680	1045	1050	1055
3682	Ieu Val Glu Thr Trp Lys Pro Asp Tyr Glu Pro Pro Val Val His		
3683	1060	1065	1070
3685	Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg		
3686	1075	1080	1085
3688	Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu		
3689	1090	1095	1100
3691	Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile		
E--> 3692	1105	1110	1115
3694	Thr Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys		1120
3695	1125	1130	1135
3697	Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu		
3698	1140	1145	1150
3700	Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val		
3701	1155	1160	1165
3703	Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr		
3704	1170	1175	1180
3706	Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Gln Lys		
E--> 3707	1185	1190	1195
3709	Leu Pro Ile Asn Ala Ieu Ser Asn Ser Leu Leu Arg His His Asn Leu		1200
3710	1205	1210	1215
3712	Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val		
3713	1220	1225	1230
3715	Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu		
3716	1235	1240	1245

fix numbers

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

3718 Lys Glu Val Lys Ala Ala Ala Ser Lys Val Ala Asn Leu Leu Ser
 3719 1250 1255 1260
 3721 Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys
E--> 3722 265 1270 1275 1280
 3724 Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
 3725 1285 1290 1295
 3727 Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr
 3728 1300 1305 1310
 3730 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Glu
 3731 1315 1320 1325
 3733 Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
 3734 1330 1335 1340
 3736 Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
E--> 3737 345 1350 1355 1360
 3739 Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser
 3740 1365 1370 1375
 3742 Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys
 3743 1380 1385 1390
 3745 Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
 3746 1395 1400 1405
 3748 Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Glu Cys Cys Asp
 3749 1410 1415 1420
 3751 Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu
E--> 3752 425 1430 1435 1440
 3754 Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr
 3755 1445 1450 1455
 3757 Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr
 3758 1460 1465 1470
 3760 Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu
 3761 1475 1480 1485
 3763 Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys
 3764 1490 1495 1500
 3766 Gln Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr
E--> 3767 505 1510 1515 1520
 3769 Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro
 3770 1525 1530 1535
 3772 Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val
 3773 1540 1545 1550
 3775 Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
 3776 1555 1560 1565
 3778 Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
 3779 1570 1575 1580
 3781 Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp
E--> 3782 585 1590 1595 1600
 3784 Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg
 3785 1605 1610 1615
 3787 Asp Gln Leu Glu Gln Ala Leu Asp Cys Gln Ile Tyr Gly Ala Cys Tyr
 3788 1620 1625 1630
 3790 Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Ieu His Gly

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34
 Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

3791 1635 1640 1645
 3793 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg
 3794 1650 1655 1660
 3796 Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp
 E--> 3797 665 1670 1675 1680
 3799 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly
 3800 1685 1690 1695
 3802 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr
 3803 1700 1705 1710
 3805 Lys Leu Lys Leu Thr Pro Ile Ala Ala Gly Gln Leu Asp Leu Ser
 3806 1715 1720 1725
 3808 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
 3809 1730 1735 1740
 3811 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala
 E--> 3812 745 1750 1755 1760
 3814 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg
 3815 1765 1770
 4761 <210> SEQ ID NO: 11
 4762 <211> LENGTH: 1771
 4763 <212> TYPE: PRT
 4764 <213> ORGANISM: Artificial Sequence
 4766 <220> FEATURE:
 4767 <223> OTHER INFORMATION: Description of Artificial Sequence:
 4768 pd.deltaNS3NS5.pj
 4770 <400> SEQUENCE: 11
 4771 Met Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
 4772 1 5 10 15
 4774 Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 4775 20 25 30
 4777 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 4778 35 40 45
 4780 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
 4781 50 55 60
 4783 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Cys Asp Glu Cys His Ser
 4784 65 70 75 80
 4786 Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala
 4787 85 90 95
 4789 Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro
 4790 100 105 110
 4792 Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser
 4793 115 120 125
 4795 Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val
 4796 130 135 140
 4798 Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys
 4799 145 150 155 160
 4801 Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala
 4802 165 170 175
 4804 Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val
 4805 180 185 190

mp 1819

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

4807 Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe
 4808 195 200 205
 4810 Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe
 4811 210 215 220
 4813 Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Leu Pro Gln Asp
 4814 225 230 235 240
 4816 Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro
 4817 245 250 255
 4819 Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
 4820 260 265 270
 4822 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
 4823 275 280 285
 4825 Glu Leu Thr Pro Ala Glu Thr Phe Val Arg Leu Arg Ala Tyr Met Asn
 4826 290 295 300
 4828 Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly
 4829 305 310 315 320
 4831 Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr
 4832 325 330 335
 4834 Lys Gln Ser Gly Gln Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr
 4835 340 345 350
 4837 Val Cys Ala Arg Ala Gln Ala Pro Pro Ser Trp Asp Gln Met Trp
 4838 355 360 365
 4840 Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu
 4841 370 375 380
 4843 Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro
 4844 385 390 395 400
 4846 Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val
 4847 405 410 415
 4849 Thr Ser Thr Trp Val Leu Val Gly Val Leu Ala Ala Leu Ala Ala
 4850 420 425 430
 4852 Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu
 4853 435 440 445
 4855 Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
 4856 450 455 460
 4858 Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
 4859 465 470 475 480
 4861 Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu
 4862 485 490 495
 4864 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr
 4865 500 505 510
 4867 Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
 4868 515 520 525
 4870 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
 4871 530 535 540
 4873 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
 4874 545 550 555 560
 4876 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
 4877 565 570 575
 4879 Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala

RAW SEQUENCE LISTING DATE: 12/07/2000
 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

4880	580	585	590
4882	Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu		
4883	595	600	605
4885	Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val		
4886	610	615	620
4888	Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val		
4889	625	630	635
4891	Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val		
4892	645	650	655
4894	Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala		
4895	660	665	670
4897	Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His		
4898	675	680	685
4900	Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val		
4901	690	695	700
4903	Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu		
4904	705	710	715
4906	His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp		
4907	725	730	735
4909	Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys		
4910	740	745	750
4912	Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe		
4913	755	760	765
4915	Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile		
4916	770	775	780
4918	Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys		
4919	785	790	795
4921	Asn Gln Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp		
4922	805	810	815
4924	Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro		
4925	820	825	830
4927	Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu		
4928	835	840	845
4930	Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly		
4931	850	855	860
4933	Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu		
4934	865	870	875
4936	Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro		
4937	885	890	895
4939	Cys Lys Pro Leu Leu Arg Glu Val Ser Phe Arg Val Gly Leu His		
4940	900	905	910
4942	Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val		
4943	915	920	925
4945	Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu		
4946	930	935	940
4948	Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser		
4949	945	950	955
4951	Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr		
4952	965	970	975

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

4954 Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu
 4955 980 985 990
 4957 Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn
 4958 995 1000 1005
 4960 Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp
 4961 1010 1015 1020
 4963 Gly Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg
 E--> 4964 1025 1030 1035 1040
 4966 Phe Ala Gln Ala Leu Pro Val Trp Ala Arg Pro ASP Tyr Asn Pro Pro
 4967 1045 1050 1055
 4969 Leu Val Glu Thr Trp Lys Pro Asp Tyr Glu Pro Pro Val Val His
 4970 1060 1065 1070
 4972 Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg
 4973 1075 1080 1085
 4975 Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu
 4976 1090 1095 1100
 4978 Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly ile
 E--> 4979 105 1110 1115 1120
 4981 Ile Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys
 4982 1125 1130 1135
 4984 Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu
 4985 1140 1145 1150
 4987 Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val
 4988 1155 1160 1165
 4990 Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr
 4991 1170 1175 1180
 4993 Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Glu Gln Lys
 E--> 4994 185 1190 1195 1200
 4996 Ile Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu
 4997 1205 1210 1215
 4999 Val Tyr Ser Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val
 5000 1220 1225 1230
 5002 Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu
 5003 1235 1240 1245
 5005 Lys Glu Val Lys Ala Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser
 5006 1250 1255 1260
 5008 Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys
 E--> 5009 265 1270 1275 1280
 5011 Ile Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
 5012 1285 1290 1295
 5014 Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr
 5015 1300 1305 1310
 5017 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln
 5018 1315 1320 1325
 5020 Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
 5021 1330 1335 1340
 5023 Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
 E--> 5024 345 1350 1355 1360
 5026 Cys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser

*fix
numbering*

RAW SEQUENCE LISTING
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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

5027	1365	1370	1375		
5029	Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys				
5030	1380	1385	1390		
5032	Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val				
5033	1395	1400	1405		
5035	Ile Glu Ser Asp Ile Arg Thr Glu Ala Ala Ile Tyr Gln Cys Cys Asp				
5036	1410	1415	1420		
5038	Lys Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu				
E--> 5039	425	1430	1435	1440	
5041	Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr				
5042	1445	1450	1455		
5044	Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr				
5045	1460	1465	1470		
5047	Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu				
5048	1475	1480	1485		
5050	Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys				
5051	1490	1495	1500		
5052	Gln Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr				
E--> 5054	505	1510	1515	1520	
5056	Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro				
5057	1525	1530	1535		
5059	Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val				
5060	1540	1545	1550		
5062	Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro				
5063	1555	1560	1565		
5065	Thr Thr Pro Ile Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro				
5066	1570	1575	1580		
5068	Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp				
E--> 5069	585	1590	1595	1600	
5071	Ala Arg Met Ile Leu Met Thr His Phe Ser Val Leu Ile Ala Arg				
5072	1605	1610	1615		
5074	Asp Gln Leu Glu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr				
5075	1620	1625	1630		
5077	Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly				
5078	1635	1640	1645		
5080	Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg				
5081	1650	1655	1660		
5082	Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp				
E--> 5084	665	1670	1675	1680	
5086	Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly				
5087	1685	1690	1695		
5089	Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr				
5090	1700	1705	1710		
5092	Lys Leu Lys Leu Thr Pro Ile Ala Ala Ala Gly Gln Leu Asp Leu Ser				
5093	1715	1720	1725		
5095	Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val				
5096	1730	1735	1740		
5098	Asn His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala				
E--> 5099	745	~	1750	1755	1760

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Input Set : A:\seqlist.txt
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RAW SEQUENCE LISTING DATE: 12/07/2000
PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
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RAW SEQUENCE LISTING DATE: 12/07/2000
PATENT APPLICATION: US/09/721,479 FILED: 07/23/34

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\1721479.raw

5388 ttgaacggcg gcaagagccaa ctgggtcgcc qcatactaca ttctcagaat gacttggtt 8100
 5390 agtaactcacc agtcacagaa aagcatlta cggatggcat gacagtaaga gaattatgc 8160
 5392 gtgtgcctt aaccatgtq gataaactcq cgcccaactt acttctgaca acgatccgg 8220
 5394 gaccqaaggq gctaaccqct ttttgcaca acatqggggq tcataactt acggatcg 8280
 5396 qtggggacc qqagetgtaa gaaacatac caaacyaega ggtgtggacc acgatcg 8340
 5398 caycaatggc aacaacgttg cgcacatctatactggca actactact etagtc 8400
 5400 qgeaacaatt aataqactgg atggaggcgg ataaaatgtc aqgaccactt ctqgctcg 8460
 5402 eccttccggc tggttgtt attgtgtata aatctggac cggtqagegt gggttc 8520
 5404 gatcalatgc aycactgggg ccagatgtta acgcctccgg tategttagt atetacacga 8580
 5406 cgggagtgta gcaacatgt gatgtggaa atagacatgt cgtgtggata lggcctc 8640
 5408 tqaatagaqca ttggtaactg tcaqaccaag llttactata tatactttag attgatitaa 8700
 5410 aacttcattt ttaattttaaq agqutctagn tgaqatctt ttttgataat etcatqacca 8760
 5412 aaatccelta acgtgagttt tctgttcaact gqeqtc 8820
 5414 qatcttcgq aqatctttt ttttgcqcg taalctctgt ctgtggaaaca aaaaaaccc 8880
 5416 cgttaccaqg qgtgttqgt tgccggatc aayagatcactt aactttttt cggaaqtlaa 8940
 5418 ctggctteag caqageggc atacccaaata ctgttcetttt aqgtqagecg tagttaggg 9000
 5420 accatctca gaaactctgtt qeacccgca catabctcg tctgttaatctt 9060
 5422 ttgtgtgtc cagtggcgat aqgtgtgtc ttaceqqgtt ggactcaaga egatgttac 9120
 5424 eggataaggc geaggggtcg qgctgaaacgg ggggttgcgtt cacacagccc agcttgqagc 9180
 5426 qaagaccita caccqaacty agataacctac agcgtqagat atqaaqadg qccaccc 9240
 5428 cegaaagggg aaaggccggc aggttacttggg taageggcag ggccggaaacggagc 9300
 5430 cqaggggactt ccagggggg aacqccctgg alcttttalaq tcttgc 9360
 5432 tctgacttga qeqtcgattt ttgtgtgtc ctgtggggg ggggagccca tggaaaaa 9420
 5434 ccageaaacqg qgcttttta cgglttccgg ctlttgcgtt qcttttgcgtt cactgtt 9480
 5436 ttctqgqtlt atccctqat tcttgcgtt acqcttattt cggcc 9540
 5438 cccgtccggc cagccgaaacg acqccggcya qgagatcactt gagegggg 9600
 5440 gctgtatgtt gtaattttctt cttaegeat tctgtgttat ttcacaccgc atatgttgc 9660
 5442 ctctcgtac aatctgttctt gatqccgcat agttaaqccca qataactcactt egatctatgt 9720
 5444 acgtgactgg gtcatgggtg cggccccgaca cccgcaaca cccgctgacg cggcc 9780
 5446 qgctgtgtc ctccggcgtt cccgttacag acaaqtgtt acqgttccgg qgagatcactt 9840
 5448 qlgtcagaggq ttttcacgtt catcaceggaa acqccggggq aqgttgcggq aqgttgc 9900
 5450 aqgttgcgtt qaaaggcattt cacaatgtt tctgttgcgtt tccgttca gatcgttgc 9960
 5452 ttctccaaq aqcyttaatg ttcgttgcgtt gataaaagggg gccatgtttaa gggcc 10020
 5454 ttctctgtttt qtcactgtatg ctccgtgtt aqggggattt ctgttcatgg ggttaatgt 10080
 5456 accqatgaaa cggagggaggq tgcfcacatg acgggttactt gatgtatgaa atgccegggtt 10140
 5458 actggaaatgt ttttgcgggtt aacoacttgc ggtatgtatg cggccggggacc aqaaqaaat 10200
 5460 cacteagggtt caatggccatg gettgcgttca atagatgttgcgttccac aqgttgc 10260
 5462 gcaacatctt gcgatgtcaga tccggaaat aatggllcag ggcgtqactt tccgttgc 10320
 5464 cagaetttac qaaacacggq aaccqaaagac catheatgtt gttgttcagg tccgttgc 10380
 5466 ttgcageggc cagtcgttactt aqgttgcgtt gctgtatgtt gatcattttt gataaccgtt 10440
 5468 aaggcaaccg cccgttccatg gccggggatc caacqacagg aqcaacgatca tgcqcc 10500
 5470 tggcccaaggq ccaacgttgc cccgttgcgtt ggtgttccac aqgttgc 10560
 5472 qatgtatgtt tcttgcgtt ggtgttgcgtt cccatcaca gtttgcgttca aqaaattgt 10620
 5474 ggttccaaattt ctgggtgtt gtaatgttgcgtt aqccgggttgc cggcc 10680
 5476 gaggtggccc ggttccatgc aqccggggc aacggggggg ggcagacaaag gtataggcg 10740
 5478 gccgttcaaa tccatgtccaa coqgttccat gttgttccggc agggggatca aatqccgttq 10800
 5480 aqgttgcgtt gtcacatgtt gcaatgttgcgtt gttgttgcgtt gggcc 10860
 5482 tgcctcgtatgtt ggtgttgcgtt tccgttgcgtt gcaacatgttgcgtt gggcc 10920
 5484 atgcqccggq aqgttgcgtt aatctataq qggaaqccca tccgttgcgtt ggtgttgcgtt 10980

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5486	gcacagcaaga	cgttgtccaa	cggcgtcgcc	gcccattgcgg	cgtataatggc	ctgtttctcg	11040
5488	ccgaaaacctt	tgggtggggg	accacgtgtgg	aaggcttgg	cggagggggtg	caagatccg	11100
5490	aataccqcac	gcgcacggcc	gatcatcgic	gcgcgtccaa	gaaacgggtc	ctcgccggaaa	11160
5492	atgtacccca	gcgtgtccgg	caccgttctt	acgagttgtca	tgataaaagaa	gacagtcata	11220
5494	agtggggcga	cgtatagtc	gcgcgcgc	caccggaa	agctgtactgg	gttqaaggct	11280
5496	ctcaaggggc	tcgttgtgg	atccatcaat	atgcgcacat	acgttgttat	gttcaagggtc	11340
5498	cgttgcgttta	agaacaaag	cggtttttt	tttqaaaggat	gttcaatgtt	gttcaatgtt	11400
5500	atcaaaatgt	caaataccca	gttgcgtatct	aaacgcgttga	atccgtgtat	cgatattgtt	11460
5502	attaaatgtt	tggtgttca	attaccaagg	ctagatatac	caatggcaaa	ctgagcacaa	11520
5504	caatccaaat	cggttttttt	tcgcaccc	tcgttttttt	tcgttttttt	tcgttttttt	11580
5506	ggatqagggt	ccgatattac	cgcaacaccc	tttttttttt	tttccgtgg	gaataataga	11640
5508	atgtcccccatt	cgaaaaatcccc	atttttttttt	cttggggat	tttttttttt	tttttttttt	11700
5510	tcgtttccaa	caggaaatgtt	ccacgttgc	ctatcttcca	gcaaaatgttc	cacttttttt	11760
5512	tcaaaattgtt	gagaataatctc	ccaaatgttct	tatctatggg	atccgggg	aacacagttac	11820
5514	cgatattttttt	caatccatcc	tcaaaatgtt	tttttttttt	tttttttttt	tttttttttt	11880
5516	cgatattttttt	aaaaaaatata	tatctatcaat	gatatgttgc	tcgggggg	aaaaacgttgg	11940
5518	ggcaaaacaaa	cgggaaaaaa	tttttttttt	tttttttttt	tttttttttt	tttttttttt	12000
5520	tatctataaaa	tttgcctttag	atccgttctt	ccgttacag	cttttttttt	tttatttttt	12060
5522	ttttttttttt	atccatcc	taatgttttt	attaaagggtt	tttttttttt	tttacgggtt	12120
5524	tcqctcataa	aaatgttttt	acgttttttt	ccgggggggg	aaacccatcc	tttttttttt	12180
5526	ctgtatcttc	ctggccggaa	accggggcata	tttttttttt	tttttttttt	tttttttttt	12240
5528	tttccatgtt	tttccatgtt	tttccatgtt	tttccatgtt	tttccatgtt	tttccatgtt	12300
5530	aaactacaaat	aaacggggca	aaacacggca	aaaaacgggg	aaacacccat	tttttttttt	12360
5532	caacctgtt	ggagtaatgt	atgacacaag	gttttttttt	tttttttttt	tttttttttt	12420
5534	ttttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	12480
5536	tttgcacccat	tttgcacccat	tttgcacccat	tttgcacccat	tttgcacccat	tttgcacccat	12540
5538	ttttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	12600
5540	ttttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	12660
5542	acaatgttttt	aaaacaaaaa	atggtttttt	tttttttttt	tttttttttt	tttttttttt	12711
5543	Met Ala Ala	Tyr Ala Ala	Gln Gly	Tyr Lys Val			
5544	1	5	10				
5545	cta gta ctc aac	ccc tct gtt	qct gca aca	ctg ggc ttt	qgt qct tac		12759
5547	Leu Val Leu Asn	Pro Ser Val Ala Ala	Thr Leu Gly	Phe Gly Ala Tyr			
5548	15	20	25				
5550	atg tcc aag	gtt cat qgg	atc gat cct	aac atc agg acc	ggg gtg aga		12807
5551	Met Ser Lys Ala His	Gly Ile Asp Pro Asn	Ile Arg Thr	Gly Val Arg			
5552	30	35	40				
5554	aca att acc act	ggc agc ccc atc	acg tac tcc	acc tac qgc aag	ttt		12855
5555	Thr Ile Thr Thr	Gly Ser Pro Ile	Thr Tyr Ser	Thr Tyr Gly Lys Phe			
5556	45	50	55				
5558	ctt gcc gac	ggc ggg tgc	tcc ggg	ggc gct tat	gac ata ata	att ttgt	12903
5559	Leu Ala Asp	Gly Cys Ser	Gly Ala Tyr	Asp Ile Ile	Tle Cys		
5560	60	65	70	75			
5562	gac gag tgc	cac tcc acg	gtt gac	acc tcc atc	tgc ggc att	ggc act	12951
5563	Asp Glu Cys His	Ser Thr Asp Ala	Thr Ser Ile	Leu Gly Ile	Gly Thr		
5564	80	85	90				
5566	gtc ctt	gac caa	gca gag	act gcc	ggg ggg aga	ctg gtt gtg	etc gec
5567	Val Leu Asp	Gln Ala Glu	Thr Ala Gly	Ala Arg	Leu Val Val	Ile Ala	
5568	95	100	105				

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Input Set : A:\seqlist.txt
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5570 acc	gcc	acc	cct	ccg	ggc	tcc	act	gtg	ccc	cat	ccc	aac	atc	qag		13047		
5571 Thr	Ala	Thr	Pro	Pro	Gly	Ser	Val	Thr	Val	Pro	His	Pro	Asn	Ile	Glu			
5572	110		115		120													
5574 gag	ttt	gtt	ctg	tcc	acc	acc	gta	qag	atc	cct	ttt	tac	ggc	aag	qct		13095	
5575 Glu	Val	Ala	Leu	Ser	Thr	Thr	Gly	Glu	Ile	Pro	Phe	Tyr	Gly	Lys	Ala			
5576	125		130		135													
5578 atc	ccc	ctc	qaa	qta	atc	aag	ggg	ggg	aga	cat	ctc	atc	ttc	tgt	cat		13143	
5579 Ile	Pro	Leu	Glu	Val	Ile	Lys	Gly	Gly	Arg	His	Leu	Ile	Phe	Cys	His			
5580	140		145		150												13191	
5582 tca	aag	aag	aag	tgc	gac	gaa	ctc	gcc	qaa	aat	ctg	gtc	gca	ttt	ggc			
5583 Ser	Lys	Lys	Lys	Asp	Glu	Leu	Ala	Ala	Lys	Leu	Val	Ala	Leu	Gly				
5584	160		165		170													
5586 atc	aat	gcc	gtg	gcc	tac	tac	ccg	qgt	ctt	gac	gtg	tcc	gtc	atc	ccg		13239	
5587 Tie	Asn	Ala	Val	Ala	Tyr	Tyr	Arg	Gly	Leu	Asp	Val	Ser	Val	Ile	Pro			
5588	175		180		185													
5590 acc	aqc	ggc	gat	ttt	gtc	gtc	gca	acc	gat	gcc	ctc	atq	acc	qgc			13287	
5591 Thr	Ser	Gly	Asp	Val	Val	Val	Val	Ala	Thr	Asp	Ala	Leu	Met	Ihr	Gly			
5592	190		195		200													
5594 tat	acc	ggc	gac	tcc	gac	tcc	gtg	ata	gac	tcc	atq	acc	qgc				13335	
5595 Tyr	Thr	Gly	Asp	Phe	Asp	Ser	Val	Ile	Asp	Cys	Asn	Thr	Cys	Val	Thr			
5596	205		210		215													
5598 caq	aca	gtc	gat	tcc	atc	agg	ctt	gac	acc	tcc	att	gag	aca	atc			13383	
5599 Gln	Thr	Val	Asp	Phe	Ser	Leu	Asp	Pro	Thr	Phe	Thr	Tle	Glu	Thr	Ile			
5600	220		225		230												235	
5602 acq	ctc	ccc	caa	qat	gtc	tcc	ccg	act	caa	cgt	ctg	ggc	agg	act			13431	
5603 Thr	Leu	Pro	Gln	Asp	Ala	Val	Ser	Arg	Thr	Gln	Arg	Arg	Gly	Arg	Thr			
5604	240		245		250													
5606 ggc	agg	ggg	agg	cca	ggc	atc	tac	aga	ttt	gtg	gca	ccg	ggg	gag	ccg		13479	
5607 Gly	Arg	Gly	Lys	Pro	Gly	Ile	Tyr	Arg	Phe	Val	Ala	Pro	Gly	Glu	Arg			
5608	255		260		265													
5610 acc	tcc	ggc	atg	tcc	gac	tcc	gtg	tcc	tat	gac	gca						13527	
5611 Pro	Ser	Gly	Met	Phe	Asp	Ser	Ser	Val	Leu	Cys	Glu	Cys	Tyr	Asp	Ala			
5612	270		275		280													
5614 ggc	tgt	gtc	tat	ttt	gag	ctc	act	atc	atc	gtt	ttt	ttt	ttt	ttt	ttt		13575	
5615 Gly	Cys	Ala	Trp	Tyr	Glu	Leu	Thr	Pro	Ala	Glu	Thr	Thr	Val	Arg	Ieu			
5616	285		290		295													
5618 cga	qcg	tac	atg	aaa	acc	acc	ccg	ggg	ctt	ccc	gtg	tgc	ccg	gac	cat	ctt		13623
5619 Arg	Ala	Tyr	Met	Asn	Thr	Pro	Gly	Leu	Pro	Val	Cys	Gln	Asp	His	Leu			
5620	300		305		310												315	
5622 gaa	ttt	tgg	gag	ggc	gtc	ttt	aca	ggc	ctc	act	cat	ata	gtt	gcc	cac		13671	
5623 Glu	Phe	Trp	Glu	Gly	Val	Phe	Thr	Gly	Leu	Thr	His	Ile	Asp	Ala	His			
5624	320		325		330													
5626 tt	cta	tcc	caq	aca	aag	caq	agt	ggg	gag	aac	ctt	cct	tac	ctg	qta		13719	
5627 Phe	Leu	Ser	Gln	Thr	Lys	Gln	Ser	Gly	Glu	Asn	Leu	Pro	Tyr	Leu	Val			
5628	335		340		345													
5630 ggc	tac	caa	gcc	acc	gtg	tgc	gtc	gtt	agg	gtt	caa	gcc	cct	ccc	eca	tgg		13767
5631 Ala	Tyr	Gln	Ala	Thr	Val	Cys	Ala	Arg	Ala	Gln	Ala	Pro	Pro	Pro	Ser			
5632	350		355		360													
5634 tgg	gac	caq	atg	tgg	aag	tgt	tgg	att	eca	ctc	ttt	ttt	ttt	ttt	ttt	ttt		13815

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5635	Trp	Asp	Gln	Met	Trp	Lys	Cys	Leu	Ile	Arg	Leu	Lys	Pro	Thr	Leu	His	
5636		365				370						375					
5638	ggg	cca	aca	ccc	ctg	cta	tac	aga	ctg	gqc	qct	gtt	cag	aat	gaa	atc	
5639	Gly	Pro	Thr	Pro	Leu	Leu	Tyr	Arg	Leu	Gly	Ala	Val	Gln	Asn	Glu	Ile	
5640	380					385					390				395	
5642	acc	ctg	acq	cac	cca	gtc	acc	aaa	tac	atc	atg	aca	tgc	atg	tgc	gcc	
5643	Thr	Leu	Thr	His	Pro	Val	Thr	Lys	Tyr	Ile	Met	Thr	Cys	Met	Ser	Ala	
5644						400				405					410		
5646	gac	ctg	gag	gtc	gtc	acg	acg	acc	tgg	gtg	ctc	gtt	ggc	ggc	gtc	ctg	
5647	Asp	Leu	Glu	Val	Val	Thr	Ser	Thr	Thr	Trp	Val	Leu	Val	Gly	Gly	Val	Leu
5648						415				420					425		
5650	gtc	gtc	tgg	gcc	qcc	tat	tgc	ctg	tca	aca	qcc	tgc	gtg	gtc	ata	gtq	
5651	Ala	Ala	Leu	Ala	Ala	Tyr	Cys	Leu	Ser	Thr	Gly	Cys	Val	Val	Ile	Val	
5652						430				435					440		
5654	ggc	agg	gtc	gtc	tgg	tcc	ggg	aag	cgg	qca	ata	ata	ect	gac	agg	gaa	
5655	Gly	Arg	Val	Val	Leu	Ser	Gly	Lys	Pro	Ala	Ile	Ile	Pro	Asp	Arg	Glu	
5656						445				450					455		
5658	gtc	ctc	tac	cga	gag	ttc	gtt	gat	gag	atg	gaa	gag	tgc	tct	cag	cac	
5659	Val	Leu	Tyr	Arg	Glu	Phe	Asp	Glu	Met	Glu	Glu	Cys	Ser	Gln	His	Leu	
5660	460					465				470						475	
5662	ccg	tac	atc	gag	caa	ggg	atg	atg	ctc	gcc	gag	cag	ttc	aag	cag	aag	
5663	Pro	Tyr	Ile	Gln	Gln	Gly	Met	Met	Leu	Ala	Glu	Gln	Gly	Met	lys	Gln	
5664						480				485					490		
5666	gcc	ctc	ggc	ctc	ctg	cag	acc	gcg	tcc	egt	cag	qca	gag	gtt	atc	gcc	
5667	Ala	Leu	Gly	Leu	Leu	Gln	Thr	Ala	Ser	Arg	Gln	Ala	Glu	Val	Ile	Ala	
5668						495				500					505		
5670	ect	gtc	cgt	cag	acc	aac	tgg	caa	aaa	ctc	gag	acc	ttc	tgg	gcg	aag	
5671	Pro	Ala	Val	Gln	Thr	Asn	Trp	Gln	Lys	Leu	Glu	Thr	Phe	Trp	Ala	Lys	
5672						510				515					520		
5674	cat	atg	tgg	aac	ttc	atc	agt	ggg	ata	caa	tac	tgg	qcg	ggc	tgg	tca	
5675	His	Met	Trp	Trp	Asn	Phe	Tle	Ser	Gly	Ile	Gln	fyr	Leu	Ala	Gly	Leu	Ser
5676						525				530					535		
5678	acg	ctg	cct	qgt	aac	ccc	gcc	att	gtc	tca	tgg	atg	gtc	ttt	aca	tgt	
5679	Thr	Leu	Pro	Gly	Asn	Pro	Ala	Ile	Ala	Ser	Ile	Met	Ala	Phe	Thr	Ala	
5680	540					545				550					555		
5682	gtc	gtc	acc	acg	cca	cta	acc	act	agc	caa	acc	ctc	ctc	tcc	aac	ata	
5683	Ala	Val	Thr	Ser	Pro	Leu	Thr	Thr	Ser	Gln	Thr	Leu	Leu	Phe	Asn	Ile	
5684						560				565					570		
5686	tgg	ggg	ggg	tgg	gtg	gtc	gtc	gcc	gtc	gcc	ccc	ggg	gtc	gtc	gtc	act	
5687	Leu	Gly	Gly	Trp	Val	Ala	Ala	Gln	Ieu	Ala	Ala	Pro	Gly	Ala	Ala	Thr	
5688						575				580					585		
5690	gcc	ttt	gtg	ggc	qct	ggc	tta	gtc	gtc	ggc	gcc	atc	ggc	agt	gtt	ggg	
5691	Ala	Phe	Val	Gly	Gly	Ala	Gly	Ieu	Ala	Gly	Ala	Ala	Ile	Gly	Ser	Val	Gly
5692						590				595					600		
5694	ctg	ggg	aag	gtc	ctc	ata	gac	atc	ctt	gca	ggg	tat	ggc	gag	ggc	ttc	
5695	Leu	Gly	Lys	Val	Leu	Ile	Asp	Ile	Ieu	Ala	Gly	Tyc	Gly	Ala	Gly	Val	
5696						605				610					615		
5698	gcg	ggg	gca	gtc	ctt	gtg	gca	ttc	aag	atc	atg	agg	gtt	gag	gtc	ccc	
5699	Ala	Gly	Ala	Leu	Val	Ala	Phe	Lys	Ile	Met	Ser	Gly	Glu	Val	Pro	Ser	

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5700	620	625	630	635	
5702	acg gag gac ctg gtc aat cta ctg ccc gcc atc ctc tgg ccc gga gcc				14631
5703	Thr Glu Asp Leu Val Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala				
5704	640	645	650		
5706	ctc gta gtc ggc gtc tgg gca gca ata ctg cgc egg cac gtt ggc				14679
5707	Ieu Val Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg His Val Gly				
5708	655	660	665		
5710	cgg ggc gaa ggg gca qtg cag tgg atg aac egg ctg ata gcc ttc gcc				14727
5711	Pro Gly Glu Gly Ala Val Gln Trp Met Asn Arg Ieu Ile Ala Phe Ala				
5712	670	675	680		
5714	tcc cgg ggg aac cat gtt tcc ccc aeg cac tac gtg cog gag age gat				14775
5715	Ser Arg Gly Asn His Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp				
5716	685	690	695		
5718	gca gct gcc cgc gtc act gcc ata ctc agc agc ctc act gta acc cag				14823
5719	Ala Ala Ala Arg Val Thr Ala Ile Leu Ser Ser Ieu Thr Val Thr Gln				
5720	700	705	710	715	
5722	ctc ctg agg cga ctg cac cag tgg ata agc tgg ggg tgg acc act cca				14871
5723	Leu Leu Arg Arg Leu His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro				
5724	720	725	730		
5726	tgc tcc ggt tcc tgg cta aag gac atc tgg gac tgg ata tgc ggg qtg				14919
5727	Cys Ser Gly Ser Trp Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val				
5728	735	740	745		
5730	tgg agc gac ttt aag acc tgg cta aaa gct aag etc atg cca cag ctg				14967
5731	Leu Ser Asp Phe Lys Thr Trp Ieu Lys Ala Lys Leu Met Pro Gln Leu				
5732	750	755	760		
5734	cct ggg atc ccc ttt gtg tcc tgc cag cgc ggg tat aag ggg gtc tgg				15015
5735	Pro Gly Ile Pro Phe Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp				
5736	765	770	775		
5738	cga ggg gac ggc atc atg cac act cgc tgc cac tgg gga gct gag atc				15063
5739	Arg Gly Asp Gly Ile Met His Thr Arg Cys His Cys Gly Ala Glu Ile				
5740	780	785	790	795	
5742	act gga cat gtc aaa aac ggg acg atg egg atc gtc ggt cct aqq acc				15111
5743	Thr Gly His Val Lys Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr				
5744	800	805	810		
5746	tgc agg aac atg tgg atg ggg acc ttc att aat gcc tac acc acc				15159
5747	Cys Arg Asn Met Trp Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr				
5748	815	820	825		
5750	ggc ccc tgt acc ccc ctt cct ggg ccc gac tac acg ttc ggg cta tgg				15207
5751	Gly Pro Cys Thr Pro Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp				
5752	830	835	840		
5754	agg gtg tct gca gag gaa tac gtg ggg atg agg caa gtg ggg gac ttc				15255
5755	Arg Val Ser Ala Glu Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe				
5756	845	850	855		
5758	cac tac gtg acg ggt atg act act gac aat ctt aaa tgc cgg tgc cag				15303
5759	His Tyr Val Thr Gly Met Thr Asp Asn Leu Lys Cys Pro Cys Gln				
5760	860	865	870	875	
5762	gtc cca tgg ccc gaa ttt ttc aca gaa ttg gac ggg gtg cgc cta cat				15351
5763	Val Pro Ser Pro Glu Phe Phe Thr Glu Ieu Asp Gly Val Arg Ieu His				
5764	880	885	890		

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5766	agg	ttt	gag	ccc	ccc	tgc	aag	ccc	ttt	ctg	cgg	gag	gag	gta	tca	ttc	15399
5767	Arg	Phe	Ala	Pro	Pro	Cys	Lys	Pro	Leu	Ieu	Arg	Glu	Glu	Val	Ser	Phe	
5768																	905
5770	aqa	qta	gga	ctc	cac	caa	tac	ccg	qta	ggg	tgc	caa	tta	cct	tgc	gag	15447
5771	Arg	Vai	Gly	Leu	His	Gln	Tyr	Pro	Val	Gly	Ser	Gln	Leu	Pro	Cys	Glu	
5772																	920
5774	ccc	caa	ccg	qac	qtc	gtq	gcc	gtq	ttt	tcg	atc	tcc	act	gat	ccc	tcc	15495
5775	Pro	Glu	Pro	Asp	Val	Ala	Vai	Leu	Thr	Ser	Met	Leu	Thr	Asp	Pro	Ser	
5776																	935
5778	cat	ata	aca	gca	gag	qcg	gcc	ggg	cga	agg	ttt	gag	agg	gga	tca	ccc	15543
5779	His	Ile	Thr	Ala	Glu	Ala	Ala	Gly	Arg	Leu	Ala	Arg	Gly	Ser	Pro		
5780																	955
5782	ccc	tct	gtq	gcc	age	tcc	tgc	gtc	age	cag	cta	tcc	get	cca	tct	tcc	15591
5783	Pro	Ser	Val	Ala	Ser	Ser	Ala	Ser	Gln	Ieu	Ser	Ala	Pro	Ser	Leu		
5784																	970
5786	aag	gca	act	tgc	acc	get	aac	cat	gac	tcc	cct	gat	get	gag	etc	ata	15639
5787	Lys	Ala	Thr	Cys	Thr	Ala	Asn	His	Asp	Ser	Pro	Asp	Ala	Glu	Leu	Ile	
5788																	985
5790	gag	gcc	aac	ctc	cta	tgg	agg	cag	gag	atg	ggc	ggc	aac	atc	acc	agg	15687
5791	Glu	Ala	Asu	Leu	Leu	Trp	Arg	Gln	Glu	Met	Gly	Gly	Asn	Ile	Thr	Arg	
5792																	1000
5794	gtt	gag	tca	gaa	aac	aaa	gtg	gtg	att	ctg	gac	tcc	tcc	gtt	ccg	ctt	15735
5795	Val	Glu	Ser	Glu	Asn	Lys	Val	Val	Ile	Leu	Asp	Ser	Phe	Asp	Pro	Leu	
5796																	1015
5798	gtq	gag	gag	qac	gag	atc	tcc	gta	ccc	gca	gaa	atc	ctg				15783
5799	Val	Ala	Glu	Glu	Asp	Glu	Arg	Glu	Ile	Ser	Val	Pro	Ala	Glu	Ile	Leu	
5800																	1035
5802	cgq	aag	tct	cgq	aga	tcc	gcc	cgq	gcc	ctg	ccc	gtt	tgg	gag	cgq	cgq	15831
5803	Arg	Lys	Ser	Arg	Arg	Phe	Ala	Gln	Ala	Leu	Pro	Val	Trp	Ala	Arg	Pro	
5804																	1050
5806	gac	tat	aac	ccc	cgq	cta	gtq	gag	acg	tgg	aaa	aag	ccc	gac	tac	gaa	15879
5807	Asp	Tyr	Asn	Pro	Leu	Val	Glu	Thr	Trp	Lys	Lys	Pro	Asp	Tyr	Glu		
5808																	1065
5810	cca	cct	gtq	gtc	cat	ggc	tgc	ccg	ctt	cca	cct	cca	aag	tcc	cct	cct	15927
5811	Pro	Pro	Val	Val	His	Gly	Cys	Pro	Leu	Pro	Pro	Lys	Ser	Pro	Pro		
5812																	1075
5814	gtg	cct	ccg	cct	ogg	aag	aag	ogg	acg	gtg	gtc	ctc	act	gaa	tca	acc	15975
5815	Val	Pro	Pro	Arg	Lys	lys	Arg	Thr	Val	Val	Leu	Thr	Glu	Ser	Thr		
5816																	1095
5818	cta	tct	act	gcc	tgg	gcc	gag	ctc	gcc	acc	aga	agc	ttt	ggc	agc	ttc	16023
5819	Leu	Ser	Thr	Ala	Ieu	Ala	Glu	Leu	Ala	Thr	Arg	Ser	Phe	Gly	Ser	Ser	
5820																	1115
5822	tcg	act	tcc	ggc	att	acg	ggc	gac	aat	acg	aca	aca	tcc	tct	gag	ccc	16071
5823	Ser	Thr	Ser	Gly	Ile	Thr	Gly	Asp	Asn	Thr	Thr	Ser	Ser	Gln	Pro		
5824																	1130
5826	gcc	cct	tct	ggc	tgc	ccc	ccc	gac	tcc	gac	get	gag	tcc	tat	tcc	tcc	16119
5827	Ala	Pro	Ser	Gly	Cys	Pro	Pro	Asp	Ser	Asp	Ala	Glu	Ser	Tyr	Ser	Ser	
5828																	1145
5830	atg	ccc	ccc	ctg	gag	ggg	gag	cct	ggg	gat	ccg	gat	ctt	agc	gac	ggg	16167

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5831 Met Pro Pro Leu Glu Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly
 5832 1150 1155 1160
 5833 tca tgg tca acg gtc aqt aqt gag ggc aac gcg gaa gat gtc gtg tgc 16215
 5835 Ser Trp Ser Thr Val Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys
 5836 1165 1170 1175
 5838 tgc tca atg tct tac tct tgg aca ggc gca ctc gtc acc ccg tgc ggc 16263
 5839 Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala
 5840 1180 1185 1190 1195
 5842 gcg gaa gaa caa cag aaa ctg ccc atc aat gca cta agc aac tgg ttg cta 16311
 5843 Ala Glu Glu Gln Lys Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu
 5844 1200 1205 1210
 5846 cgt cac cac aat ttt gtg tat tcc acc acc tca cgc agt gct tgc caa 16359
 5847 Arg His His Asn Leu Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln
 5848 1215 1220 1225
 5850 agg cag aag aaa gtc aca ltt gac aca ctg caa gtt ctg gac agc cat 16407
 5851 Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Ile Asp Ser His
 5852 1230 1235 1240
 5854 tac cag gac gta ctc aag gag gtt aaa gca gcg gcg tca aaa gtg aag 16455
 5855 Tyr Gln Asp Val Leu Lys Glu Val Lys Ala Ala Ser Lys Val Lys
 5856 1245 1250 1255
 5858 gct aac ttg eta tcc gta gag gaa gct tgc aac ctg aca ccc cca cac 16503
 5859 Ala Asn Leu Ieu Ser Val Glu Gln Ala Cys Ser Leu Thr Pro Pro His
 5860 1260 1265 1270 1275
 5862 tca gcc aaa tcc aag ttt ggt tat ggg gca aaa gac gtc cgt tgc cat 16551
 5863 Ser Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His
 5864 1280 1285 1290
 5866 gcc aga aag gcc gta acc cac aac tcc gtc tgg aaa gac ctt ctg 16599
 5867 Ala Arg Lys Ala Val Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu
 5868 1295 1300 1305
 5870 gaa gac aat gta aca cca ata gac act acc atc atg gct aag aac gag 16647
 5871 Glu Asp Asn Val Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu
 5872 1310 1315 1320
 5874 gtt ttc tgc gtt cag cct gag aag ggg ggt cgt aag cca gct cgt ctc 16695
 5875 Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu
 5876 1325 1330 1335
 5878 atc gtg ttc ccc gat ctg ggc gtg cgc gtg tgc gaa aag atg gct ttg 16743
 5879 Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu
 5880 1340 1345 1350 1355
 5882 tac gac gtg gtt aca aag ctc ccc ttg gcc gtg atg gga aac tcc tac 16791
 5883 Tyr Asp Val Val Thr Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr
 5884 1360 1365 1370
 5886 gga itc caa tac tca cca gga cag egg gtt gaa ttc ctc gtg caa gcg 16839
 5887 Gly Phe Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala
 5888 1375 1380 1385
 5890 tgg aag tcc aag aaa acc cca atg ggg ttc tgg tat gat acc cgc tgc 16887
 5891 Trp Lys Ser Lys Lys Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys
 5892 1390 1395 1400
 5894 ttt gac tcc aca gtc act gag aac gac atc cgt aac gaa gag gca atc 16935
 5895 Phe Asp Ser Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile

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5896	1405	1410	1415	
5898	tac caa tqt tgt gac ctc gac ccc gaa gcc egc gtg gcc atc aag tcc			16983
5899	Tyr Gln Cys Cys Asp Leu Asp Pro Gln Ala Ala Arg Val Ala Ile Lys Ser			
5900	1420	1425	1430	1435
5902	ctc acc qag agg ctt tat gtt ggg ggc cct ctt acc aat tca agg ggg			17031
5903	Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly			
5904	1440	1445	1450	
5906	qag aac tgc ggc tat ctc agg tgc ctc gca agc ggc gta ctg aca act			17079
5907	Glu Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr			
5908	1455	1460	1465	
5910	aga tgt ggt aac acc ctc act tgc tac atc aag gcc cgg gca gcc tgt			17127
5911	Ser Cys Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys			
5912	1470	1475	1480	
5914	cga gcc gca ggg ctc cag gac tyc acc atg ctc gtg tgt ggc gac gac			17175
5915	Arg Ala Ala Gly Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp			
5916	1485	1490	1495	
5918	tta gtc gtt atc tgt gaa agc gcg ggg gtc cag gag gac gcg gcg agc			17223
5919	Leu Val Val Ile Cys Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser			
5920	1500	1505	1510	1515
5922	ctg aca gca ttc acg gac gtc acc atg acc aag tac tcc qcc ccc cct ggg			17271
5923	Leu Arg Ala Phe Thr Gln Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly			
5924	1520	1525	1530	
5926	gac ecc cca caa cca gaa tac gac ttg gag ctc ata aca tca tgc tec			17319
5927	Asp Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser			
5928	1535	1540	1545	
5930	tcc aac gtc tca gtc gcc cac gac ggc gtc ggt gga aag aag gtc tac tac			17367
5931	Ser Asn Val Ser Val Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr			
5932	1550	1555	1560	
5934	ctc acc cgt gac cct aca acc ccc ctc gcg aga gtc gtc tgg gag aca			17415
5935	Leu Thr Arg Asp Pro Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr			
5936	1565	1570	1575	
5938	gca aca cac aca act cca aat tcc tgg cta ggc aac ata atc atg ttt			17463
5939	Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe			
5940	1580	1585	1590	1595
5942	gcc ecc aca ctg tgg gcg agg atg ata ctg atg acc cat ttc ttt age			17511
5943	Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser			
5944	1600	1605	1610	
5946	gtc ctt ata gcc agg gac cag ctt gaa cag gcc ctc gat tgc gag atc			17559
5947	Val Leu Ile Ala Arg Asp Gln Leu Gln Gln Ala Leu Asp Cys Glu Ile			
5948	1615	1620	1625	
5950	tac ggg gec tyc tac tcc ata gaa cca ctg gat cta ctc cca atc att			17607
5951	Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile			
5952	1630	1635	1640	
5954	caa aqa ctc cat ggc ctc ayc qca ttt tca ctc cac agt tac tct cca			17655
5955	Gln Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro			
5956	1645	1650	1655	
5958	ggt gaa atc aat agg gtg gec gca tgc ctc aya aaa ctt ggg gta ccc			17703
5959	Gly Glu Ile Asn Arg Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro			
5960	1660	1665	1670	1675

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Output Set: N:\CRF3\12072000\I721479.raw

5962 ccc ttg cga gct tgg aga aac cgq gcc agg age gtc cgc gct agg ctt 17751
 5963 Pro Leu Arg Ala Trp Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu
 5964 1680 1685 1690
 5966 ctg gcc aga gga ggc agg gct gcc ata tgg ggc aag tac etc ttc aac 17799
 5967 Leu Ala Arg Gly Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn
 5968 1695 1700 1705
 5970 tgg qca gta aga aca aag ctc aaa ctc act cca ata ggg gcc gct qgc 17847
 5971 Trp Ala Val Arg Thr Lys Leu Lys Leu Thr Pro Ile Ala Ala Gly
 5972 1710 1715 1720
 5974 caq ctg gac ttg tcc ggc tgg ttc acg gct ggc tac agc ggg gga gac 17895
 5975 Gln Leu Asp Leu Ser Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp
 5976 1725 1730 1735
 5978 att tat cac agc gtq tct cat gcc egg ccc cgc tgg atc tgg ttt tgc 17943
 5979 Ile Tyr His Ser Val Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys
 5980 1740 1745 1750 1755
 5982 cta ctc ctg ctt qct gca ggg gta ggc atc tac etc ctc ccc aac cqa 17991
 5983 Leu Leu Leu Leu Ala Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg
 5984 1760 1765 1770
 5986 atg agc acg aat cct aaa cct caa aqa aag acc aaa cgt aac acc aac 18039
 5987 Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 5988 1775 1780 1785
 5990 cgg cgg cgg cag gag gtc aag ttc cgg ggt ggc ggt cag atc gtt ggt 18087
 5991 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
 5992 1790 1795 1800
 5994 gga gtt tac ttg ttq cgg cgc aqg ggc cct aqa ttg ggt gtg cgc qcg 18135
 5995 Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 5996 1805 1810 1815
 5998 acq aqa aag act tec gag cgg tec caa cct cqa ggt aqa cgt caq cct 18183
 5999 Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 6000 1820 1825 1830 1835
 6002 atc ccc aag qct cgt cgg ccc gag qgc aqg acc tgg gct cag ccc ggg 18231
 6003 Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly
 6004 1840 1845 1850
 6006 tac cct tgg ccc etc tat qgc aat gag qgc tgc ggg tgg gca tgg 18279
 6007 Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 6008 1855 1860 1865
 6010 ctc ctg tct ccc cgt qgc tct cgg cct aqc tgg ggc ccc aca gac ccc 18327
 6011 Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
 6012 1870 1875 1880
 6014 cgg cgt agg tgg cgc aat ttg ggt aag taatagtaga ctttggttccc 18374
 6015 Arg Arg Arg Ser Arg Asn Leu Gly Lys
 6016 1885 1890
 6018 actgtacttt tagctcgta aaaaataaat atactttca ttctcccgta aacaacatgt 18434
 6020 ttccccatgt aataatccctt tctatttttc gtcccgltac caacttttaca catactttat 18494
 6022 atagatattc acttctatac actaaaaaaac taagacaatt ttaatttgc tgcctgcatt 18554
 6024 attcattttt gttataaattt cctataattt atccatattt tagctaaaaa aagatqaatg 18614
 6026 tgaatgeaat ctaaagagaa ttggatctga tccacaggac gggttgtggtc gccatgatcg 18674
 6028 cgttagicgat aqtgqctcca aqtagcqaaq cgagcqaaq tggggggcgq ccaaagecggt 18734
 6030 cqgacacgtgc tccgagaacg ggtlqcgatca gaaatlgcat aacgcataat aqgcctagca 18794

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 PATENT APPLICATION: US/09/721,479 TIME: 07:23:34

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\I2072000\I721479.raw

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6116 Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Cys
6117 145 150 155 160
6119 Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala
6120 165 170 175
6122 Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val
6123 180 185 190
6125 Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe
6126 195 200 205
6128 Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe
6129 210 215 220
6131 Ser Leu Asp Pro Thr Phe Thr Glu Thr Ile Thr Leu Pro Gln Asp
6132 225 230 235 240
6134 Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro
6135 245 250 255
6137 Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
6138 260 265 270
6140 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
6141 275 280 285
6143 Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn
6144 290 295 300
6146 Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly
6147 305 310 315 320
6149 Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr
6150 325 330 335
6152 Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr
6153 340 345 350
6155 Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp
6156 355 360 365
6158 Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu
6159 370 375 380
6161 Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro
6162 385 390 395 400
6164 Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val
6165 405 410 415
6167 Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala
6168 420 425 430
6170 Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu
6171 435 440 445
6173 Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
6174 450 455 460
6176 Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
6177 465 470 475 480
6179 Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu
6180 485 490 495
6182 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Thr
6183 500 505 510
6185 Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
6186 515 520 525
6188 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

6189	530	535	540
6191	Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro		
6192	545	550	555
6194	Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val		560
6195	565	570	575
6197	Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala		
6198	580	585	590
6200	Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu		
6201	595	600	605
6203	Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val		
6204	610	615	620
6206	Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val		
6207	625	630	635
6209	Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val		
6210	645	650	655
6212	Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Ala		
6213	660	665	670
6215	Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His		
6216	675	680	685
6218	Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val		
6219	690	695	700
6221	Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu		
6222	705	710	715
6224	His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp		
6225	725	730	735
6227	Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys		
6228	740	745	750
6230	Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe		
6231	755	760	765
6233	Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile		
6234	770	775	780
6236	Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys		
6237	785	790	795
6239	Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp		800
6240	805	810	815
6242	Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro		
6243	820	825	830
6245	Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu		
6246	835	840	845
6248	Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly		
6249	850	855	860
6251	Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu		
6252	865	870	875
6254	Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro		
6255	885	890	895
6257	Cys Lys Pro Leu Leu Arg Glu Val Ser Phe Arg Val Gly Leu His		
6258	900	905	910
6260	Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val		
6261	915	920	925

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

6263 Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu
 6264 930 935 940
 6266 Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser
 6267 945 950 955 960
 6269 Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr
 6270 965 970 975
 6272 Ala Asn His Asp Ser Pro Asp Ala Glu Ile Glu Ala Asn Leu Leu
 6273 980 985 990
 6275 Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn
 6276 995 1000 1005
 6278 Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp
 6279 1010 1015 1020
 6281 Glu Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg
E--> 6282 025 1030 1035 1040
 6284 Phe Ala Gln Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro
 6285 1045 1050 1055
 6287 Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His
 6288 1060 1065 1070
 6290 Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg
 6291 1075 1080 1085
 6293 Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu
 6294 1090 1095 1100
 6296 Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile
E--> 6297 105 1110 1115 1120
 6299 Thr Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys
 6300 1125 1130 1135
 6302 Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu
 6303 1140 1145 1150
 6305 Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val
 6306 1155 1160 1165
 6308 Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr
 6309 1170 1175 1180
 6311 Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Glu Gln Lys
E--> 6312 185 1190 1195 1200
 6314 Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu
 6315 1205 1210 1215
 6317 Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val
 6318 1220 1225 1230
 6320 Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu
 6321 1235 1240 1245
 6323 Lys Glu Val Lys Ala Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser
 6324 1250 1255 1260
 6326 Val Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys
E--> 6327 265 1270 1275 1280
 6329 Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
 6330 1285 1290 1295
 6332 Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr
 6333 1300 1305 1310
 6335 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln

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Input Set : A:\seqlist.txt
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6336      1315          1320          1325
6338 Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
6339      1330          1335          1340
6341 Lys Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
E--> 6342 (345) 1350          1355          1360
6344 Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser
6345      1365          1370          1375
6347 Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys
6348      1380          1385          1390
6350 Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
6351      1395          1400          1405
6353 Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp
6354      1410          1415          1420
6356 Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu
E--> 6357 (425) 1430          1435          1440
6359 Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr
6360      1445          1450          1455
6362 Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr
6363      1460          1465          1470
6365 Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu
6366      1475          1480          1485
6368 Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys
6369      1490          1495          1500
6371 Gln Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr
E--> 6372 (505) 1510          1515          1520
6374 Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro
6375      1525          1530          1535
6377 Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val
6378      1540          1545          1550
6380 Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
6381      1555          1560          1565
6383 Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
6384      1570          1575          1580
6386 Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp
E--> 6387 (585) 1590          1595          1600
6389 Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg
6390      1605          1610          1615
6392 Asp Gln Leu Glu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr
6393      1620          1625          1630
6395 Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly
6396      1635          1640          1645
6398 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg
6399      1650          1655          1660
6401 Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp
E--> 6402 (665) 1670          1675          1680
6404 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly
6405      1685          1690          1695
6407 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr
6408      1700          1705          1710

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

6410 Lys Leu Lys Leu Thr Pro Ile Ala Ala Ala Gly Gln Leu Asp Leu Ser
 6411 1715 1720 1725
 6413 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
 6414 1730 1735 1740
 6416 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala
E--> 6417 1745 1750 1755 1760
 6419 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg Met Ser Thr Asn Pro
 6420 1765 1770 1775
 6422 Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln Asp
 6423 1780 1785 1790
 6425 Val Lys Phe Pro Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu
 6426 1795 1800 1805
 6428 Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser
 6429 1810 1815 1820
 6431 Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg
E--> 6432 1825 1830 1835 1840
 6434 Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu
 6435 1845 1850 1855
 6437 Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg
 6438 1860 1865 1870
 6440 Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro Arg Arg Ser Arg
 6441 1875 1880 1885
 6443 Asn Leu Gly Lys
 6444 1890
 7432 <210> SEQ ID NO: 15
 7433 <211> LENGTH: 1944
 7434 <212> TYPE: PRT
 7435 <213> ORGANISM: Artificial Sequence
 7437 <220> FEATURE:
 7438 <223> OTHER INFORMATION: Description of Artificial Sequence:
 7439 pd.delta.NS3NS5.pj.core173
 7441 <400> SEQUENCE: 15
 7442 Met Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
 7443 1 5 10 15
 7445 Ser Val Ala Ala Thr Ile Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 7446 20 25 30
 7448 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 7449 35 40 45
 7451 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
 7452 50 55 60
 7454 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser
 7455 65 70 75 80
 7457 Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala
 7458 85 90 95
 7460 Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro
 7461 100 105 110
 7463 Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser
 7464 115 120 125
 7466 Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

7467	130	135	140
7469	Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Cys		
7470	145	150	155
7472	Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala		160
7473	165	170	175
7475	Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val		
7476	180	185	190
7478	Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe		
7479	195	200	205
7481	Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe		
7482	210	215	220
7484	Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Leu Pro Gln Asp		
7485	225	230	235
7487	Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro		240
7488	245	250	255
7490	Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe		
7491	260	265	270
7493	Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr		
7494	275	280	285
7496	Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn		
7497	290	295	300
7499	Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly		
7500	305	310	315
7502	Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr		
7503	325	330	335
7505	Lys Gin Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr		
7506	340	345	350
7508	Val Cys Ala Arg Ala Gin Ala Pro Pro Pro Ser Trp Asp Gln Met Trp		
7509	355	360	365
7511	Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu		
7512	370	375	380
7514	Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro		
7515	385	390	395
7517	Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val		
7518	405	410	415
7520	Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala		
7521	420	425	430
7523	Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu		
7524	435	440	445
7526	Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu		
7527	450	455	460
7529	Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln		
7530	465	470	475
7532	Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu		
7533	485	490	495
7535	Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr		
7536	500	505	510
7538	Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe		
7539	515	520	525

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

7541 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
 7542 530 535 540
 7544 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
 7545 545 550 555 560
 7547 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
 7548 565 570 575
 7550 Ala Ala Glu Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala
 7551 580 585 590
 7553 Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu
 7554 595 600 605
 7556 Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Ile Val
 7557 610 615 620
 7559 Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val
 7560 625 630 635 640
 7562 Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val
 7563 645 650 655
 7565 Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala
 7566 660 665 670
 7568 Val Gln Itp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His
 7569 675 680 685
 7571 Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Arg Val
 7572 690 695 700
 7574 Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu
 7575 705 710 715 720
 7577 His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp
 7578 725 730 735
 7580 Leu Arg Asp Ile Trp Asp Trp Ile Cys Gln Val Leu Ser Asp Phe Lys
 7581 740 745 750
 7583 Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe
 7584 755 760 765
 7586 Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile
 7587 770 775 780
 7589 Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys
 7590 785 790 795 800
 7592 Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp
 7593 805 810 815
 7595 Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro
 7596 820 825 830
 7598 Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu
 7599 835 840 845
 7601 Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly
 7602 850 855 860
 7604 Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu
 7605 865 870 875 880
 7607 Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro
 7608 885 890 895
 7610 Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg Val Gly Leu His
 7611 900 905 910
 7613 Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

7614	915	920	925
7616	Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu		
7617	930	935	940
7619	Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser		
7620	945	950	955
7622	Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr		960
7623	965	970	975
7625	Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu		
7626	980	985	990
7628	Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn		
7629	995	1000	1005
7631	Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp		
7632	1010	1015	1020
7634	Gln Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg		
E--> 7635	025	1030	1035
			1040
7637	The Ala Gln Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro		
7638	1045	1050	1055
7640	Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His		
7641	1060	1065	1070
7643	Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg		
7644	1075	1080	1085
7646	Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu		
7647	1090	1095	1100
7649	Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile		
E--> 7650	105	1110	1115
			1120
7652	The Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys		
7653	1125	1130	1135
7655	Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu		
7656	1140	1145	1150
7658	Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val		
7659	1155	1160	1165
7661	Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr		
7662	1170	1175	1180
7664	Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Gln Glu Gln Lys		
E--> 7665	185	1190	1195
			1200
7667	Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu		
7668	1205	1210	1215
7670	Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val		
7671	1220	1225	1230
7673	Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu		
7674	1235	1240	1245
7676	Lys Glu Val Lys Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser		
7677	1250	1255	1260
7679	Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys		
E--> 7680	265	1270	1275
			1280
7682	Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val		
7683	1285	1290	1295
7685	Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr		
7686	1300	1305	1310

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

7688 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln
 7689 1315 1320 1325
 7691 Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
 7692 1330 1335 1340
 7694 Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
 E--> 7695 1345 1350 1355 1360
 7697 Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser
 7698 1365 1370 1375
 7700 Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys
 7701 1380 1385 1390
 7703 Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
 7704 1395 1400 1405
 7706 Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp
 7707 1410 1415 1420
 7709 Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu
 E--> 7710 1425 1430 1435 1440
 7712 Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr
 7713 1445 1450 1455
 7715 Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr
 7716 1460 1465 1470
 7718 Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu
 7719 1475 1480 1485
 7721 Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys
 7722 1490 1495 1500
 7724 Gln Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr
 E--> 7725 1505 1510 1515 1520
 7727 Ser Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro
 7728 1525 1530 1535
 7730 Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val
 7731 1540 1545 1550
 7733 Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
 7734 1555 1560 1565
 7736 Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
 7737 1570 1575 1580
 7739 Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp
 E--> 7740 1585 1590 1595 1600
 7742 Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg
 7743 1605 1610 1615
 7745 Asp Gln Leu Glu Gln Ala Leu Asp Cys Gln Ile Tyr Gly Ala Cys Tyr
 7746 1620 1625 1630
 7748 Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly
 7749 1635 1640 1645
 7751 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg
 7752 1650 1655 1660
 7754 Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp
 E--> 7755 1665 1670 1675 1680
 7757 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly
 7758 1685 1690 1695
 7760 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

7761 1700 1705 1710
 7763 Lys Leu Lys Leu Thr Pro Ile Ala Ala Ala Gly Gin Leu Asp Leu Ser
 7764 1715 1720 1725
 7765 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
 7767 1730 1735 1740
 7769 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala
 E--> 7770 745 1750 1755 1760
 7772 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg Met Ser Thr Asn Pro
 7773 1765 1770 1775
 7775 Lys Pro Gin Arg Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln Asp
 7776 1780 1785 1790
 7778 Val Lys Phe Pro Gly Gly Glu Ile Val Gly Gly Val Tyr Leu Leu
 7779 1795 1800 1805
 7781 Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser
 7782 1810 1815 1820
 7784 Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg
 E--> 7785 825 1830 1835 1840
 7787 Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu
 7788 1845 1850 1855
 7790 Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg
 7791 1860 1865 1870
 7793 Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro Arg Arg Arg Ser Arg
 7794 1875 1880 1885
 7796 Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
 7797 1890 1895 1900
 7799 Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
 E--> 7800 905 1910 1915 1920
 7802 Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
 7803 1925 1930 1935
 7805 Thr Gly Asn Leu Pro Gly Cys Ser
 7806 1940
 8726 <210> SEQ ID NO: 17
 8787 <211> LENGTH: 1911
 8788 <212> TYPE: PRT
 8789 <213> ORGANISM: Artificial Sequence
 8792 <220> FEATURE:
 8793 <223> OTHER INFORMATION: Description of Artificial Sequence:
 8794 pd.delta.NS3NS5.pj.core140
 8796 <400> SEQUENCE: 17
 8797 Met Ala Ala Tyr Ala Ala Gin Gly Tyr Lys Val Leu Val Leu Asn Pro
 8798 1 5 10 15
 8800 Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 8801 20 25 30
 8803 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 8804 35 40 45
 8806 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly
 8807 50 55 60
 8809 Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser
 8810 65 70 75 80

ma 45-47

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

8812 Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala
 8813 85 90 95
 8815 Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro
 8816 100 105 110
 8818 Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Ieu Ser
 8819 115 120 125
 8821 Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ieu Glu Val
 8822 130 135 140
 8824 Ile Lys Gly Gly Arg His Ieu Ile Phe Cys His Ser Lys Lys Lys Cys
 8825 145 150 155 160
 8827 Asp Glu Leu Ala Ala Lys Leu Val Ala Ieu Gly Ile Asn Ala Val Ala
 8828 165 170 175
 8830 Tyr Tyr Arg Gly Ieu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val
 8831 180 185 190
 8833 Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe
 8834 195 200 205
 8836 Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe
 8837 210 215 220
 8839 Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Ieu Pro Gln Asp
 8840 225 230 235 240
 8842 Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro
 8843 245 250 255
 8845 Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
 8846 260 265 270
 8848 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
 8849 275 280 285
 8851 Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn
 8852 290 295 300
 8854 Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly
 8855 305 310 315 320
 8857 Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr
 8858 325 330 335
 8860 Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr
 8861 340 345 350
 8863 Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp
 8864 355 360 365
 8866 Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu
 8867 370 375 380
 8869 Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro
 8870 385 390 395 400
 8872 Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val
 8873 405 410 415
 8875 Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Ieu Ala Ala
 8876 420 425 430
 8878 Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu
 8879 435 440 445
 8881 Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
 8882 450 455 460
 8884 Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

8885	465	470	475	480
8887	Gly Met Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu			
8888	485	490	495	
8890	Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr			
8891	500	505	510	
8893	Asn Trp Gln Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe			
8894	515	520	525	
8896	Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn			
8897	530	535	540	
8899	Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro			
8900	545	550	555	560
8902	Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val			
8903	565	570	575	
8905	Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala			
8906	580	585	590	
8908	Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu			
8909	595	600	605	
8911	Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val			
8912	610	615	620	
8914	Ala Phe Lys Ile Met Ser Gln Glu Val Pro Ser Thr Glu Asp Leu Val			
8915	625	630	635	640
8917	Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val			
8918	645	650	655	
8920	Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala			
8921	660	665	670	
8923	Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His			
8924	675	680	685	
8926	Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val			
8927	690	695	700	
8929	Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu			
8930	705	710	715	720
8932	His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp			
8933	725	730	735	
8935	Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys			
8936	740	745	750	
8938	Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe			
8939	755	760	765	
8941	Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile			
8942	770	775	780	
8944	Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys			
8945	785	790	795	800
8947	Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp			
8948	805	810	815	
8950	Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro			
8951	820	825	830	
8953	Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu			
8954	835	840	845	
8956	Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His Tyr Val Thr Gly			
8957	850	855	860	

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input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

8959 Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Val Pro Ser Pro Glu
 8960 865 870 875 880
 8962 Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro
 8963 885 890 895
 8965 Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg Val Gly Leu His
 8966 900 905 910
 8968 Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val
 8969 915 920 925
 8971 Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu
 8972 930 935 940
 8974 Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Val Ala Ser
 8975 945 950 955 960
 8977 Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr
 8978 965 970 975
 8980 Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu
 8981 980 985 990
 8983 Trp Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn
 8984 995 1000 1005
 8986 Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp
 8987 1010 1015 1020
 8989 Glu Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg
 E--> 8990 1025 1030 1035 1040
 8992 Ile Ala Gln Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro
 8993 1045 1050 1055
 8995 Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His
 8996 1060 1065 1070
 8998 Gly Cys Pro Leu Pro Pro Lys Ser Pro Pro Val Pro Pro Pro Arg
 8999 1075 1080 1085
 9001 Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu
 9002 1090 1095 1100
 9004 Ala Ile Leu Ala Thr Arg Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile
 E--> 9005 1095 1110 1115 1120
 9007 Thr Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys
 9008 1125 1130 1135
 9010 Pro Pro Asp Ser Asp Ala Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu
 9011 1140 1145 1150
 9013 Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val
 9014 1155 1160 1165
 9016 Ser Ser Glu Ala Asn Ala Glu Asp Val Val Cys Cys Ser Met Ser Tyr
 9017 1170 1175 1180
 9019 Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Glu Gln Lys
 E--> 9020 1185 1190 1195 1200
 9022 Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu
 9023 1205 1210 1215
 9025 Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val
 9026 1220 1225 1230
 9028 Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu
 9029 1235 1240 1245
 9031 Lys Glu Val Lys Ala Ala Ser Lys Val Ala Asn Leu Leu Ser

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\I721479.raw

9032	1250	1255	1260	
9034	Yal Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys			
E--> 9035	265	1270	1275	1280
9037	Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val			
9038	1285	1290	1295	
9040	Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr			
9041	1300	1305	1310	
9043	Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln			
9044	1315	1320	1325	
9046	Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp			
9047	1330	1335	1340	
9049	Leu Nly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr			
E--> 9050	345	1350	1355	1360
9052	Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser			
9053	1365	1370	1375	
9055	Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys			
9056	1380	1385	1390	
9058	Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val			
9059	1395	1400	1405	
9061	Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp			
9062	1410	1415	1420	
E--> 9064	Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu			
E--> 9065	425	1430	1435	1440
9067	Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr			
9068	1445	1450	1455	
9070	Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr			
9071	1460	1465	1470	
9073	Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu			
9074	1475	1480	1485	
9076	Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys			
9077	1490	1495	1500	
9079	Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr			
E--> 9080	505	1510	1515	1520
9082	Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro			
9083	1525	1530	1535	
9085	Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val			
9086	1540	1545	1550	
9088	Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro			
9089	1555	1560	1565	
9091	Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro			
9092	1570	1575	1580	
E--> 9094	Yal Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp			
E--> 9095	585	1590	1595	1600
9097	Ile Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg			
9098	1605	1610	1615	
9100	Asp Gln Leu Glu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr			
9101	1620	1625	1630	
9103	Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly			
9104	1635	1640	1645	

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

9106 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg
 9107 1650 1655 1660
 9109 Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp
 E--> 9110 665 1670 1675 1680
 9112 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly
 9113 1685 1690 1695
 9115 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr
 9116 1700 1705 1710
 9118 Lys Leu Lys Leu Thr Pro Ile Ala Ala Gly Gln Leu Asp Leu Ser
 9119 1715 1720 1725
 9121 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
 9122 1730 1735 1740
 9124 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala
 E--> 9125 745 1750 1755 1760
 9127 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg Met Ser Thr Asn Pro
 9128 1765 1770 1775
 9130 Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln Asp
 9131 1780 1785 1790
 9133 Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu
 9134 1795 1800 1805
 9136 Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser
 9137 1810 1815 1820
 9139 Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg
 E--> 9140 825 1830 1835 1840
 9142 Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu
 9143 1845 1850 1855
 9145 Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg
 9146 1860 1865 1870
 9148 Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro Arg Arg Arg Ser Arg
 9149 1875 1880 1885
 9151 Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu
 9152 1890 1895 1900
 9154 Met Gly Tyr Ile Pro Leu Val
 E--> 9155 905 1910
 10139 <210> SEQ ID NO: 19
 10140 <211> LENGTH: 1921
 10141 <212> TYPE: PRT
 10142 <213> ORGANISM: Artificial Sequence *pj 50-52*
 10144 <220> FEATURE:
 10145 <223> OTHER INFORMATION: Description of Artificial Sequence:
 10146 pd.delta.NS3NS5.pj.core150
 10148 <400> SEQUENCE: 19
 10149 Met Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro
 10150 1 5 10 15
 10152 Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His
 10153 20 25 30
 10155 Gly Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly
 10156 35 40 45
 10158 Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly

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Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\12072000\1721479.raw

10159	50	55	60
10161	Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser		
10162	65	70	75
10164	Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala		80
10165	85	90	95
10167	Glu Thr Ala Gly Ala Arg Leu Val Val Ala Ala Thr Ala Thr Pro Pro		
10168	100	105	110
10170	Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser		
10171	115	120	125
10173	Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val		
10174	130	135	140
10176	Ile Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys		
10177	145	150	155
10179	Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala		160
10180	165	170	175
10182	Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val		
10183	180	185	190
10185	Val Val Val Ala Thr Asp Ala Leu Met Thr Gly Tyr Thr Gly Asp Phe		
10186	195	200	205
10188	Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe		
10189	210	215	220
10191	Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Ile Thr Leu Pro Gln Asp		
10192	225	230	235
10194	Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro		240
10195	245	250	255
10197	Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe		
10198	260	265	270
10200	Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr		
10201	275	280	285
10203	Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn		
10204	290	295	300
10206	Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly		
10207	305	310	315
10209	Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr		320
10210	325	330	335
10212	Lys Gln Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln Ala Thr		
10213	340	345	350
10215	Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp		
10216	355	360	365
10218	Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu		
10219	370	375	380
10221	Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile Thr Leu Thr His Pro		
10222	385	390	395
10224	Val Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu Val Val		400
10225	405	410	415
10227	Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala		
10228	420	425	430
10230	Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Val Val Leu		
10231	435	440	445

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

10233 Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu
10234 450 455 460
10236 Phe Asp Glu Met Gln Glu Cys Ser Gln His Leu Pro Tyr Ile Glu Gln
10237 465 470 475 480
10239 Gly Met Met Leu Ala Gln Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu
10240 485 490 495
10242 Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Ala Pro Ala Val Gln Thr
10243 500 505 510
10245 Asn Trp Glu Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asn Phe
10246 515 520 525
10248 Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn
10249 530 535 540
10251 Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
10252 545 550 555 560
10254 Leu Thr Thr Ser Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val
10255 565 570 575
10257 Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala
10258 580 585 590
10260 Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu
10261 595 600 605
10263 Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val
10264 610 615 620
10266 Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val
10267 625 630 635 640
10269 Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val
10270 645 650 655
10272 Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala
10273 660 665 670
10275 Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His
10276 675 680 685
10278 Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val
10279 690 695 700
10281 Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu
10282 705 710 715 720
10284 His Gln Trp Ile Ser Ser Gln Cys Thr Thr Pro Cys Ser Gly Ser Trp
10285 725 730 735
10287 Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys
10288 740 745 750
10290 Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe
10291 755 760 765
10293 Val Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile
10294 770 775 780
10296 Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val Lys
10297 785 790 795 800
10299 Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp
10300 805 810 815
10302 Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro
10303 820 825 830
10305 Leu Pro Ala Pro Asn Tyr Thr Phe Ala Leu Trp Arg Val Ser Ala Glu

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Input Set : A:\seqlist.txt
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10306	835	840	845														
10308	Glu	Tyr	Val	Glu	Ile	Arg	Gln	Val	Gly	Asp	Phe	His	Tyr	Val	Thr	Gly	
10309	839						855							860			
10311	Met	Thr	Thr	Asp	Asn	Leu	Lys	Cys	Pro	Cys	Gln	Val	Pro	Ser	Pro	Glu	
10312	865													870	875		880
10314	Phe	Phe	Thr	Glu	Ile	Leu	Asp	Gly	Val	Arg	Leu	His	Arg	Phe	Ala	Pro	Pro
10315														885	890		895
10317	Cys	Lys	Pro	Leu	Leu	Arg	Glu	Glu	Val	Ser	Phe	Arg	Val	Gly	Leu	His	
10318														900	905		910
10320	Glu	Tyr	Pro	Val	Gly	Ser	Gln	Leu	Pro	Cys	Glu	Pro	Glu	Pro	Asp	Val	
10321														915	920		925
10323	Ala	Val	Leu	Thr	Ser	Met	Leu	Thr	Asp	Pro	Ser	His	Ile	Thr	Ala	Glu	
10324														930	935		940
10326	Ala	Ala	Gly	Arg	Arg	Leu	Ala	Arg	Gly	Ser	Pro	Pro	Ser	Val	Ala	Ser	
10327	945													950	955		960
10329	Ser	Ser	Ala	Ser	Gln	Leu	Ser	Ala	Pro	Ser	Leu	Lys	Ala	Thr	Cys	Thr	
10330														965	970		975
10332	Ala	Asn	His	Asp	Ser	Pro	Asp	Ala	Glu	Leu	Ile	Glu	Ala	Asn	Leu	Leu	
10333														980	985		990
10335	Trp	Arg	Gln	Glu	Met	Gly	Gly	Asn	Ile	Thr	Arg	Val	Glu	Ser	Glu	Asn	
10336														995	1000		1005
10338	Lys	Val	Val	Ile	Leu	Asp	Ser	Phe	Asp	Pro	Leu	Val	Ala	Glu	Glu	Asp	
10339														1010	1015		1020
10341	Glu	Arg	Glu	Ile	Ser	Val	Pro	Ala	Glu	Ile	Leu	Arg	Lys	Ser	Arg	Arg	
E--> 10342	025													1030	1035		1040
10344	Phe	Ala	Gln	Ala	Ile	Pro	Val	Trp	Ala	Arg	Pro	Asp	Tyr	Asn	Pro	Pro	
10345														1045	1050		1055
10347	Leu	Val	Glu	Thr	Trp	Lys	Lys	Pro	Asp	Tyr	Glu	Pro	Pro	Val	Val	His	
10348														1060	1065		1070
10350	Gly	Cys	Pro	Leu	Pro	Pro	Pro	Lys	Ser	Pro	Pro	Pro	Val	Pro	Pro	Pro	Arg
10351														1075	1080		1085
10353	Lys	Lys	Arg	Thr	Val	Val	Leu	Thr	Glu	Ser	Thr	Leu	Ser	Thr	Ala	Leu	
10354														1090	1095		1100
10356	Ala	Glu	Leu	Ala	Thr	Arg	Ser	Phe	Gly	Ser	Ser	Ser	Thr	Ser	Gly	Ile	
E--> 10357	105													1110	1115		1120
10359	Thr	Gly	Asp	Asn	Thr	Thr	Ser	Ser	Glu	Pro	Ala	Pro	Ser	Gly	Cys		
10360														1125	1130		1135
10362	Pro	Pro	Asp	Ser	Asp	Ala	Glu	Ser	Tyr	Ser	Ser	Met	Pro	Pro	Leu	Glu	
10363														1140	1145		1150
10365	Gly	Glu	Pro	Gly	Asp	Pro	Asp	Leu	Ser	Asp	Gly	Ser	Trp	Ser	Thr	Val	
10366														1155	1160		1165
10368	Ser	Ser	Glu	Ala	Asp	Ala	Glu	Asp	Val	Val	Cys	Cys	Ser	Met	Ser	Tyr	
10369														1170	1175		1180
10371	Ser	Trp	Thr	Gly	Ala	Ile	Leu	Vai	Thr	Pro	Cys	Ala	Aia	Glu	Gln	Lys	
E--> 10371	185													1190	1195		1200
10374	Leu	Pro	Ile	Asn	Ala	Ile	Ser	Asn	Ser	Leu	Leu	Arg	His	His	Asn	Leu	
10375														1205	1210		1215
10377	Val	Tyr	Ser	Thr	Thr	Ser	Arg	Ser	Ala	Cys	Gln	Arg	Gln	Lys	Lys	Val	
10378														1220	1225		1230

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Input Set : A:\seqlist.txt
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10380 Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val Leu
 10381 1235 1240 1245
 10383 Lys Glu Val Lys Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser
 10384 1250 1255 1260
 10386 Val Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys
 E--> 10387 265 1270 1275 1280
 10389 Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
 10390 1285 1290 1295
 10392 Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn Val Thr
 10393 1300 1305 1310
 10395 Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln
 10396 1315 1320 1325
 10398 Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp
 10399 1330 1335 1340
 10401 Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Thr
 E--> 10402 345 1350 1355 1360
 10404 Ile Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser
 10405 1365 1370 1375
 10407 Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys
 10408 1380 1385 1390
 10410 Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
 10411 1395 1400 1405
 10413 Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp
 10414 1410 1415 1420
 10416 Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu
 E--> 10417 425 1430 1435 1440
 10419 Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr
 10420 1445 1450 1455
 10422 Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr
 10423 1460 1465 1470
 10425 Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu
 10426 1475 1480 1485
 10428 Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys
 10429 1490 1495 1500
 10431 Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr
 E--> 10432 505 1510 1515 1520
 10434 Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro
 10435 1525 1530 1535
 10437 Glu Tyr Asp Leu Glu Ile Ile Thr Ser Cys Ser Ser Asn Val Ser Val
 10438 1540 1545 1550
 10440 Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro
 10441 1555 1560 1565
 10443 Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
 10444 1570 1575 1580
 10446 Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp
 E--> 10447 585 1590 1595 1600
 10449 Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg
 10450 1605 1610 1615
 10452 Asp Gln Leu Glu Gln Ala Leu Asp Cys Glu Ile Tyr Gly Ala Cys Tyr

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/721,479

DATE: 12/07/2000
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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

10453	1620	1625	1630
10455 Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly			
10456	1635	1640	1645
10458 Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg			
10459	1650	1655	1660
10461 Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp			
E--> 10462 665	1670	1675	1680
10464 Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ala Arg Gly Gly			
10465	1685	1690	1695
10467 Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr			
10468	1700	1705	1710
10470 Lys Leu Lys Leu Thr Pro Ile Ala Ala Gly Gln Leu Asp Leu Ser			
10471	1715	1720	1725
10473 Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val			
10474	1730	1735	1740
10476 Ser His Ala Arg Pro Arg Trp Ile Trp Phe Cys Leu Leu Leu Ala			
E--> 10477 745	1750	1755	1760
10479 Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg Met Ser Thr Asn Pro			
10480	1765	1770	1775
10482 Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln Asp			
10483	1780	1785	1790
10485 Val Lys Phe Pro Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu			
10486	1795	1800	1805
10488 Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser			
10489	1810	1815	1820
10491 Glu Arg Ser Glu Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg			
E--> 10492 825	1830	1835	1840
10494 Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu			
10495	1845	1850	1855
10497 Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg			
10498	1860	1865	1870
10500 Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro Arg Arg Ser Arg			
10501	1875	1880	1885
10503 Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu			
10504	1890	1895	1900
10506 Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg			
E--> 10507 905	1910	1915	1920
10509 Ala			

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/721,479

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Input Set : A:\seqlist.txt
Output Set: N:\CRF3\12072000\I721479.raw

L:12 M:270 C: Current Application Number differs, Replaced Application Number
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:823 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
M:332 Repeated in SeqNo=2
L:1571 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1571 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1765 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4
M:332 Repeated in SeqNo=4
L:3677 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:9
M:332 Repeated in SeqNo=9
L:4964 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:11
M:332 Repeated in SeqNo=11
L:6076 M:252 E: No. of Seq. differs. <211>LENGTH:Input:20220 Found:20160 SEQ:12
L:6282 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:13
M:332 Repeated in SeqNo=13
L:7635 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:15
M:332 Repeated in SeqNo=15
L:8990 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:17
M:332 Repeated in SeqNo=17
L:10342 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19
M:332 Repeated in SeqNo=19

f